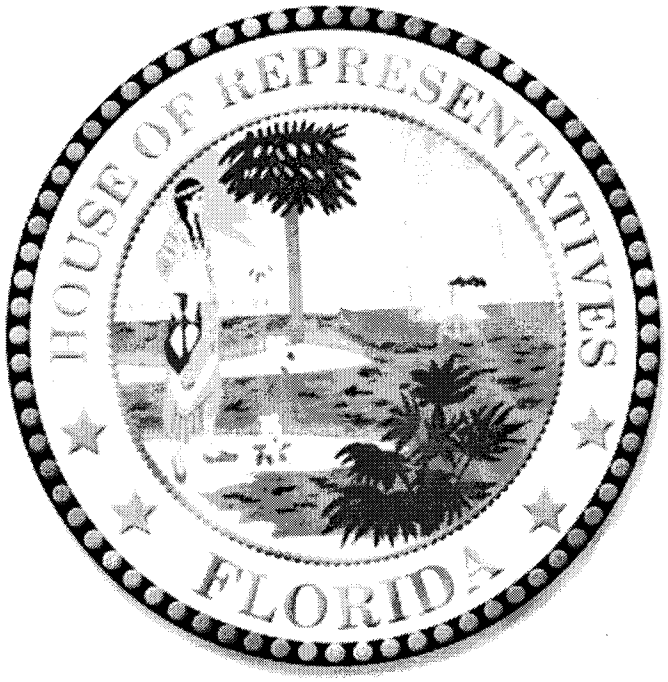


Economic Development, Trade & Banking Committee

Tuesday, September 13, 2005
10:00 am – 12:00 pm
306 HOB

Allan G. Bense
Speaker

Gus Bilirakis
Chair

Committee Meeting Notice

HOUSE OF REPRESENTATIVES

Speaker Allan G. Bense

(AMENDED 9/2/2005 3:37:06PM)

Amended(2)

Economic Development, Trade & Banking Committee

Start Date and Time:	Tuesday, September 13, 2005 10:00 am
End Date and Time:	Tuesday, September 13, 2005 12:00 pm
Location:	306 HOB
Duration:	2.00 hrs

Presentation on the United States-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) and the Free Trade Area of the Americas by Manny Mencia, Senior Vice President, International Trade & Business Development, Enterprise Florida, Inc., and Dr. Antonio Villamil, Chief Executive Officer, The Washington Economics Group, Inc.

Presentations on the status of the Scripps Biomedical Research Institution:

Dr. Harry Orf, Vice President of Scientific Operations and Professor of Chemistry, Scripps Florida

Shannon LaRocque, Scripps Program Manager, Palm Beach County Board of County Commissioners

Sara Misselhorn, Scripps Project Director, Governor's Office of Tourism, Trade and Economic Development

NOTICE FINALIZED on 09/02/2005 15:37 by GOLDING.SARA

The Florida House of Representatives

Commerce Council

Economic Development, Trade & Banking Committee

Allan G. Bense
Speaker

Gus Michael Bilirakis
Chair

Agenda
September 13, 2005

I. Roll Call

II. Welcome and Opening Remarks

III. Presentations :

The status of the Scripps Biomedical Research Institution.:

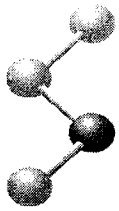
- Dr. Harry Orf, Vice President of Scientific Operations and Professor of Chemistry, Scripps Florida
- Shannon LaRocque, Scripps Program Manager, Palm Beach County Board of County Commissioners
- Sara Misselhorn, Scripps Project Director, Governor's Office of Tourism, Trade and Economic Development

The United States-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) and the Free Trade Area of the Americas.

- Manny Mencia, Senior Vice President, International Trade & Business Development, Enterprise Florida, Inc.
- Dr. Antonio Villamil, Chief Executive Officer, The Washington Economics Group, Inc.

IV. Adjourn

308 House Office Building, 402 South Monroe Street, Tallahassee, Florida 32399-1300
(850) 414-9782



SCRIPPS
FLORIDA
THE SCRIPPS RESEARCH INSTITUTE

Scripps Florida - Realizing the Vision

13 September 2005

Harry W. Orf, PhD
Vice President for Scientific Operations
and Professor of Chemistry
Scripps Florida

Scripps Florida - Realizing the Vision

Vision of Scripps Florida

- The Scientific Vision
- The Educational/Outreach Vision
- The Physical Vision
  - Operational Status
    - Personnel
    - Facilities

Scripps Florida - Realizing the Vision

Vision of Scripps Florida

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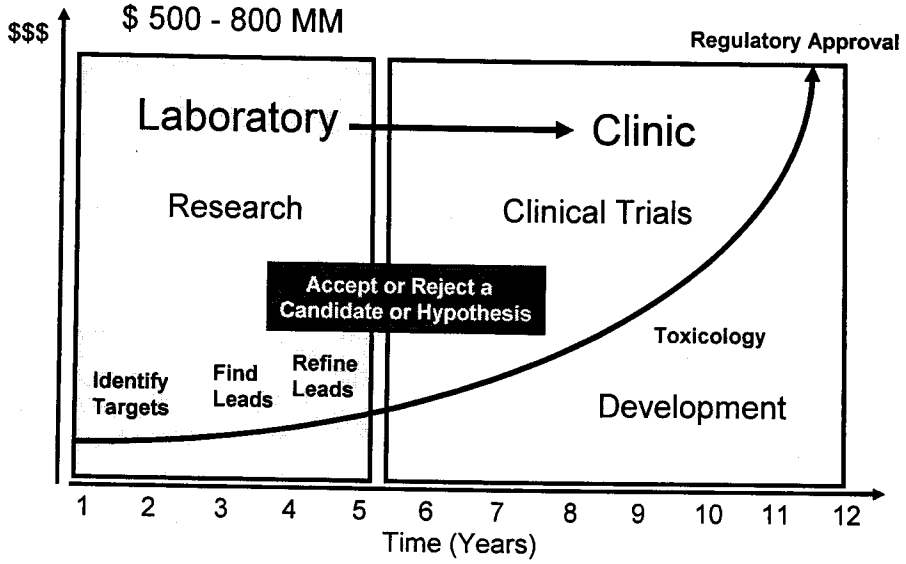
The Scientific Vision
What Are We Trying To Do With Scripps Florida?

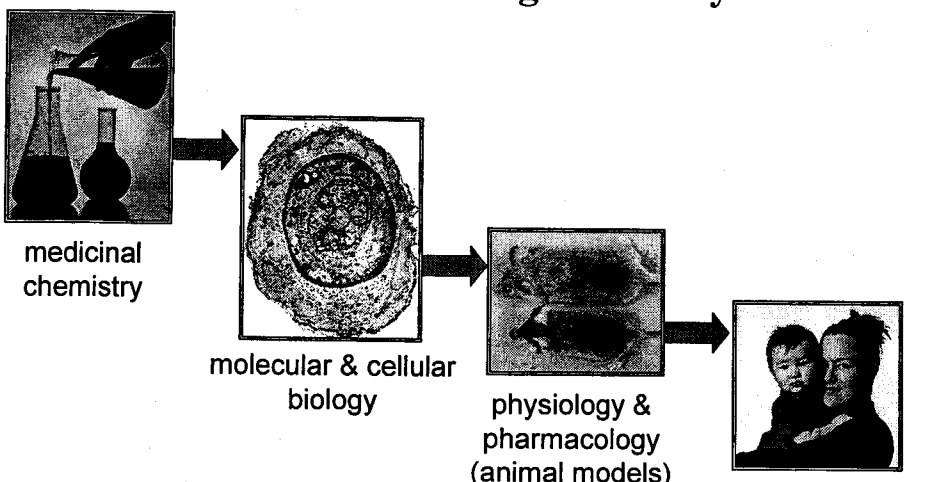
- **In a Nutshell:**
  - Apply **edge-cutting technology (robotics and IT)** to
  - **Fundamental biomedical questions** by
  - A bright generation of **scientists who understand both.**
- **Toward What End?**
  - Development of a **drug discovery platform** that
    - **Will eliminate much of the guesswork**
    - **Reduce much of the risk**
    - **Shorten greatly the timelines**
  - Involved in the billion dollar gamble of creating a drug.

Time & Expense in Drug Discovery

Most projects turn out to be conceptually flawed

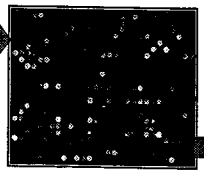


Traditional Drug Discovery



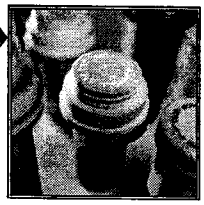
Genomics-driven Drug Discovery

clinical research
(patient population)



expression analysis,
polymorphism
analysis

physiology &
pharmacology
(animal
models)



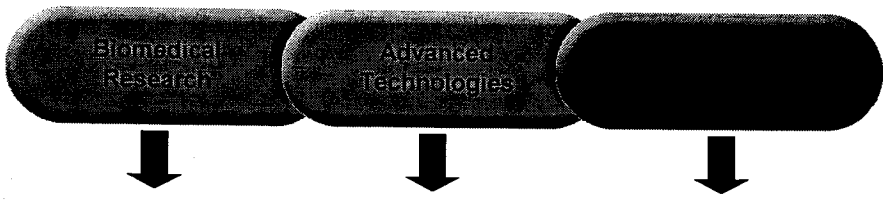
drug
development

The Scientific Vision
What's Different (Better)?

- **Access to Edge-Cutting Technology in Robotics and Supercomputing**
  - **Bring high throughput technology into the academic lab**
  - **Use technology engine to drive drug discovery**
- **Culture and Philosophy**
  - **Open access for collaborative discoveries**
  - **Team approach (Chemists, Biologists, Biostatisticians working on projects together under common leadership)**
  - **Open laboratory concept to promote interactions, meetings**
  - **Science first - entire support structure exists to facilitate science**
- **Academic Organization**
  - **No traditional departmental boundaries (e.g., Chemistry, Biology, Computer Science)**
  - **Based on Interdisciplinary Themes**
    - **Biomedical Research**
    - **Advanced Technologies**
    - **Drug Discovery**

Interdisciplinary Themes of Scripps Florida

Collaboration is Key



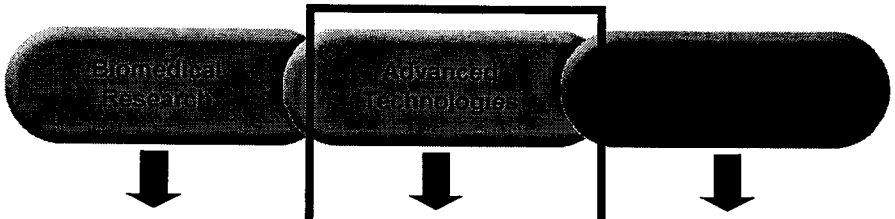
- Infectious Diseases
- Neurobiology
- Immune Disorders
- Metabolism/Cardiovascular
- Cancer Biology

- Genomics
- Genetics
- Protein Sciences
- Informatics
- Engineering/Robotics

- Assay Development
- Lead ID/ HTS
- Medicinal Chemistry
- Pharmacology
- Preclinical
- Proof of Concept

Interdisciplinary Themes of Scripps Florida

Collaboration is Key



- Infectious Diseases
- Neurobiology
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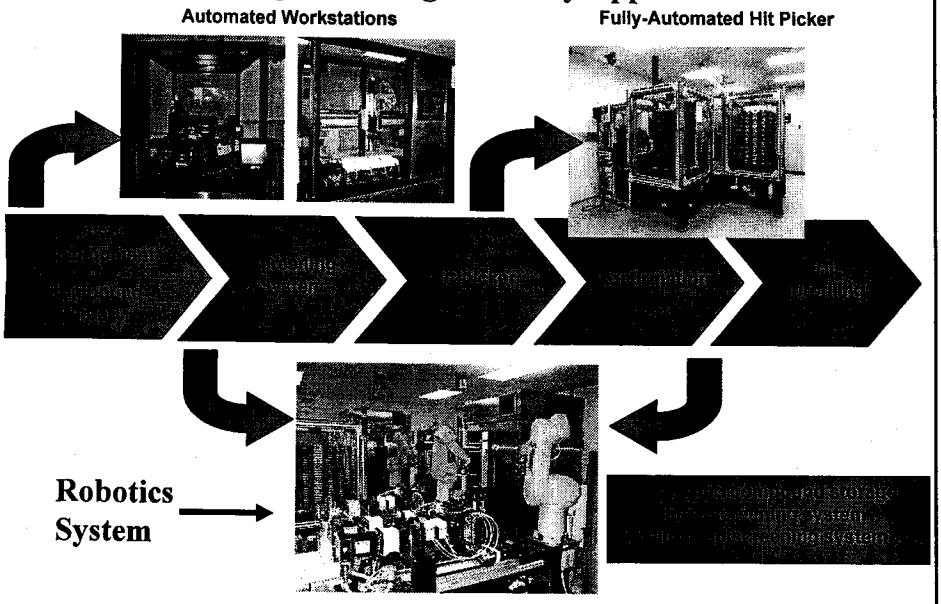
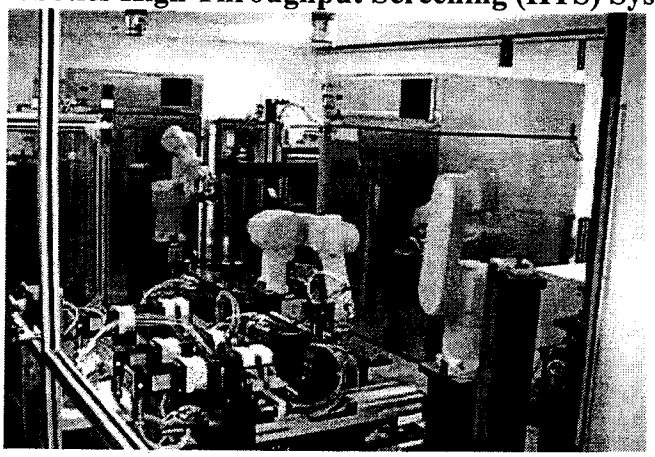
- Engineering/Robotics

Assay Development
Lead ID/ HTS
Medicinal Chemistry
Pharmacology
Preclinical
Proof of Concept

Engineering Division Provides Platform for Integrated Drug Discovery Approach

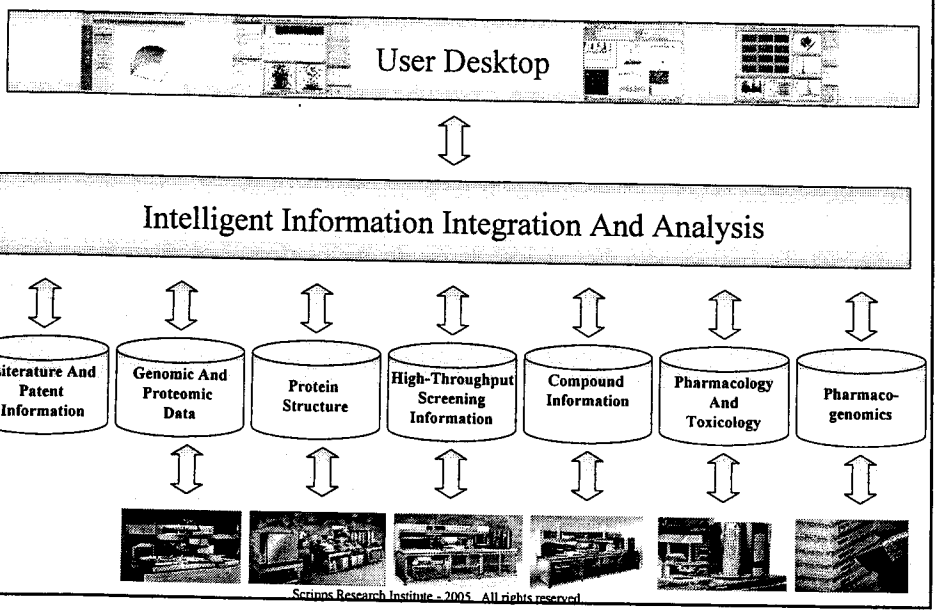


Robotics High Throughput Screening (HTS) System



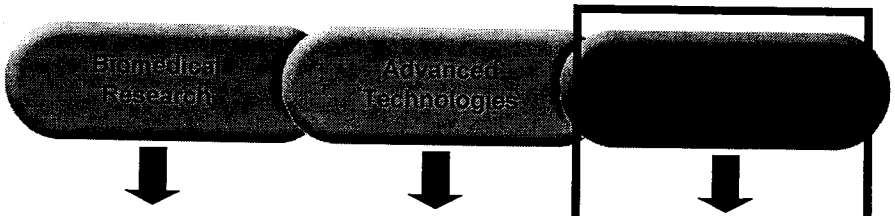
- 1 million data points/day capacity in both cell based and biochemical assays
- Validated technology – Similar to systems built and installed at GNF
- Proprietary system designed by/for Scripps Florida
- On-line compound storage
- Significant cost efficiencies achieved in reliable 1536-well format with a wide variety of assays
- Dramatically increase the number of targets screened per year (cDNA, RNA, proteins, antibodies)
- Entire collection screened in 1 batch, resulting in high quality data

Intelligent Information Integration Framework



Interdisciplinary Themes of Scripps Florida

Collaboration is Key



- Infectious Diseases
- Neurobiology
- Immune Disorders
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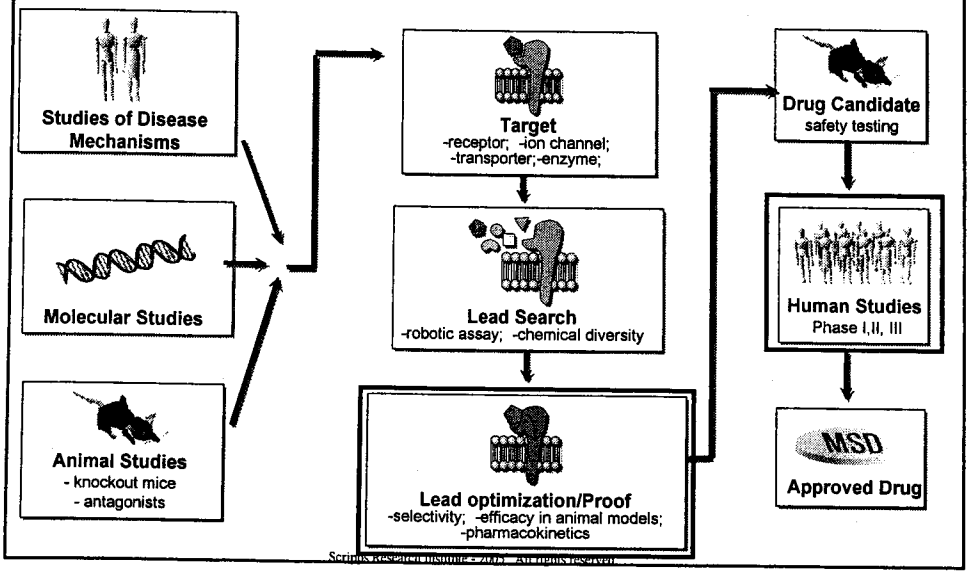
- Cancer Biology

- Genomics
- Genetics
- Protein Sciences
- Informatics
- Engineering/Robotics

- Assay Development
- Lead ID/ HTS
- Medicinal Chemistry
- Pharmacology
- Preclinical
- Proof of Concept

The Drug Discovery Process
Key Challenge: Optimize Translational Research



FDA View of Improving Critical Path

"There is currently an urgent need for additional public-private collaborative work on applying technologies such as genomics, proteomics, bioinformatics systems, and new imaging technologies to the science of medical product development"

Innovation Stagnation, Challenge and Opportunity on the Critical Path to New Medical Products, U.S. Department of Heath and Human Services, Food and Drug Administration, **March 2004**

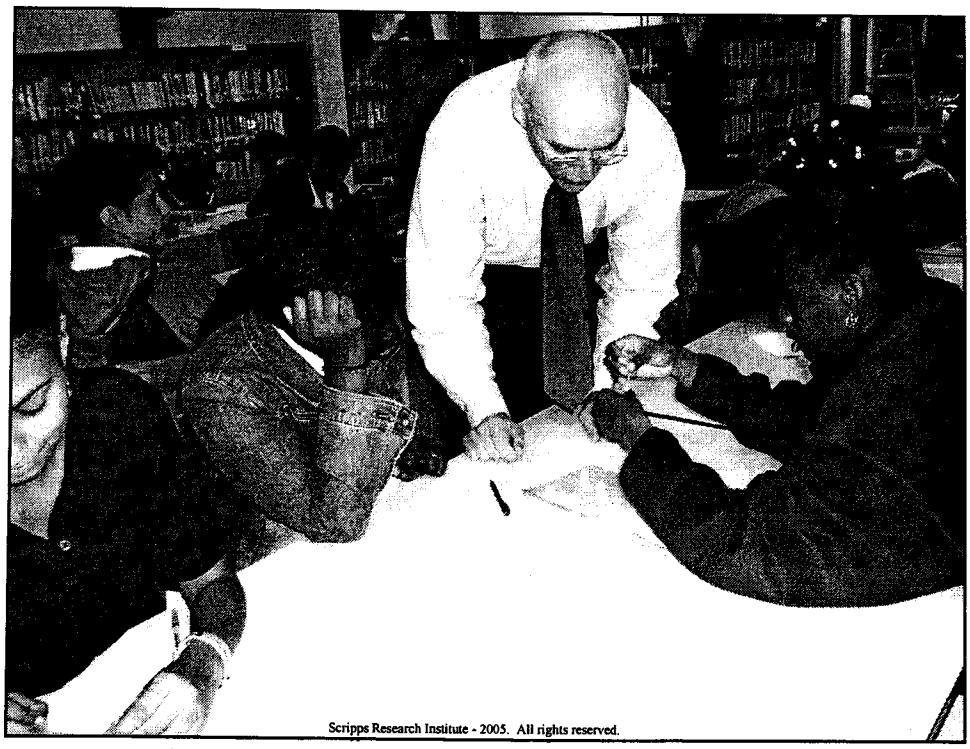
(Scripps Florida Agreement - January 2004)

Scripps Florida - Realizing the Vision

- **Vision of Scripps Florida**
  - **The Scientific Vision**
  - **The Educational/Outreach Vision**
  - **The Physical Vision**
    - **Operational Status**
      - **Personnel**
      - **Facilities**

Educational and Community Outreach

- **Scripps Florida Outreach - Near Term Initiatives**
  - Science Partnership Scholars Program (6 - 8 weeks)
    - Two Local High School Teachers to La Jolla in Summer 2004
  - Summer Research Internships (7 weeks)
    - Four HS Students + Three Teachers in Summer 2005
  - Public Lectures, Symposia, Open Houses (1 - 2 days)
    - Highlights in Biomedicine Symposium - November 2005
- **Scripps Florida Outreach - Long Term Objectives**
  - Extend Educational Outreach Program to Middle School Students
  - Involve Regional College Students in High/Middle School Outreach
  - Educate Local Health and Regulatory Officials on EH&S Issues Relating to Biomedical Research
  - Reach the Public - Raise Overall Science Consciousness
    - More informed debates on ethical issues (cloning, stem cell research, animals)
    - Improve understanding of tie between biomedical research and human health
      - **Understand the risks (minimal), Embrace the promise (great)**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Scripps Florida
Committed to Fostering the Advancement of Science
Science Saturday at Scripps Florida
15 May 2005
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Scripps Florida - Realizing the Vision

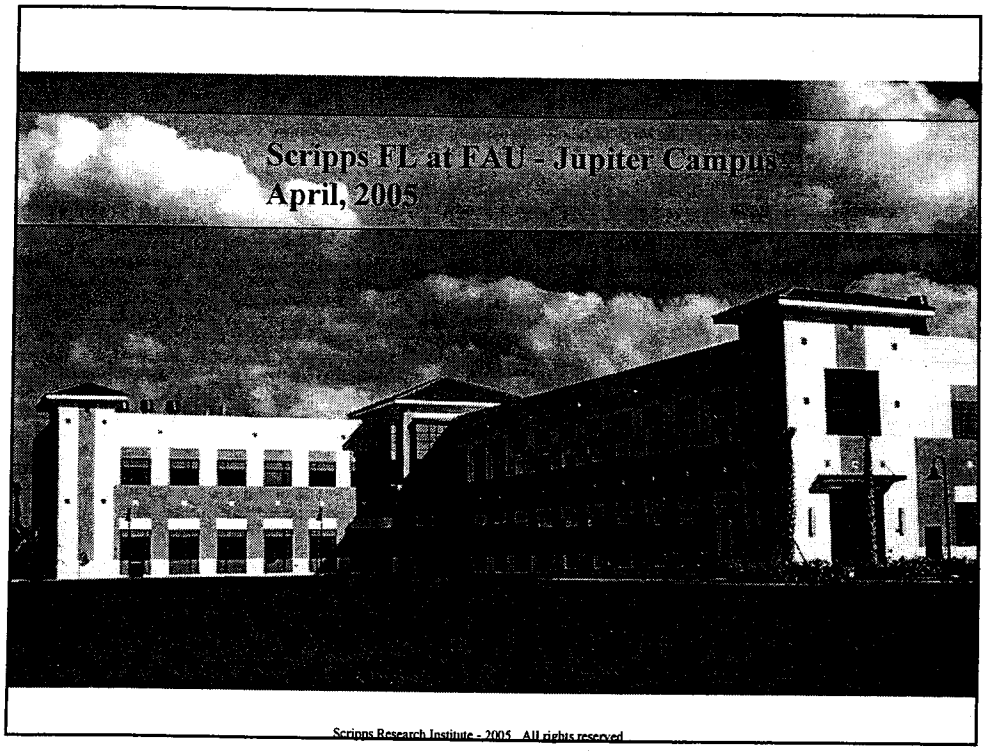
- **Vision of Scripps Florida**
  - **The Scientific Vision**
  - **The Educational/Outreach Vision**
  - **The Physical Vision**
    - **Operational Status**
      - **Personnel**
      - **Facilities**

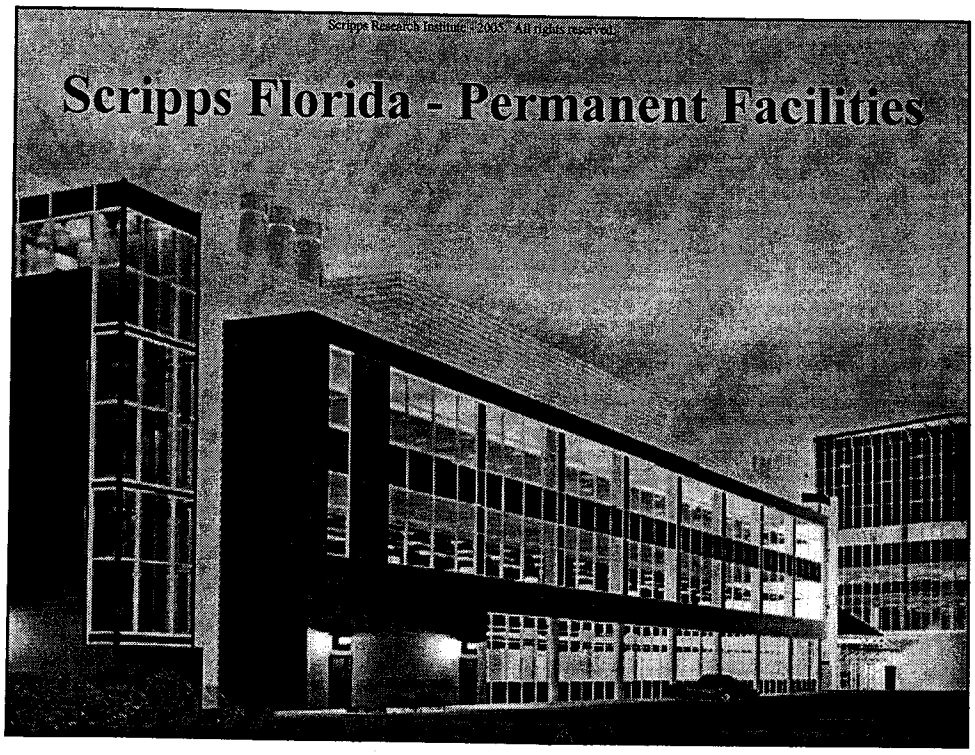
Scripps Florida
Operational Status (9/05) - Personnel

- **164 Staff On Site or En Route (Accepted)**
  - 162 Full Time Equivalents (5 Part Time and/or Contract)
  - 159 at Jupiter Campus and 5 in West Palm Beach
  - 23 Faculty (17 Professor-track and 6 Director-track)
  - 12 Positions Open
- **Component Breakdown**
  - 35 Administration and Support Personnel (21%)
  - 129 Science Personnel (79%)
    - 48 Biomedical Research
    - 31 Advanced Technologies
    - 50 Drug Discovery

Scripps Florida
Operational Status (9/05) - Facilities

- **Current (T1) 41,000 SF Building at FAU Jupiter**
  - Occupied February 2005
  - At capacity August 2005
  - Three additional double-wide trailers for support staff
- **Second (T2) 33,000 SF Building at FAU Jupiter**
  - Approvals received July 2005
  - Design and permitting underway
  - 1-2 additional double-wide trailers included
  - Occupancy projected August 2006
- **Permanent 350,000 SF Facilities at Mecca**
  - Several litigation suits still in progress
  - Design complete, out to bid
  - Foundation permit issued July 2005
  - Bid packages due early Sept 2005
  - Completion projected July 2007

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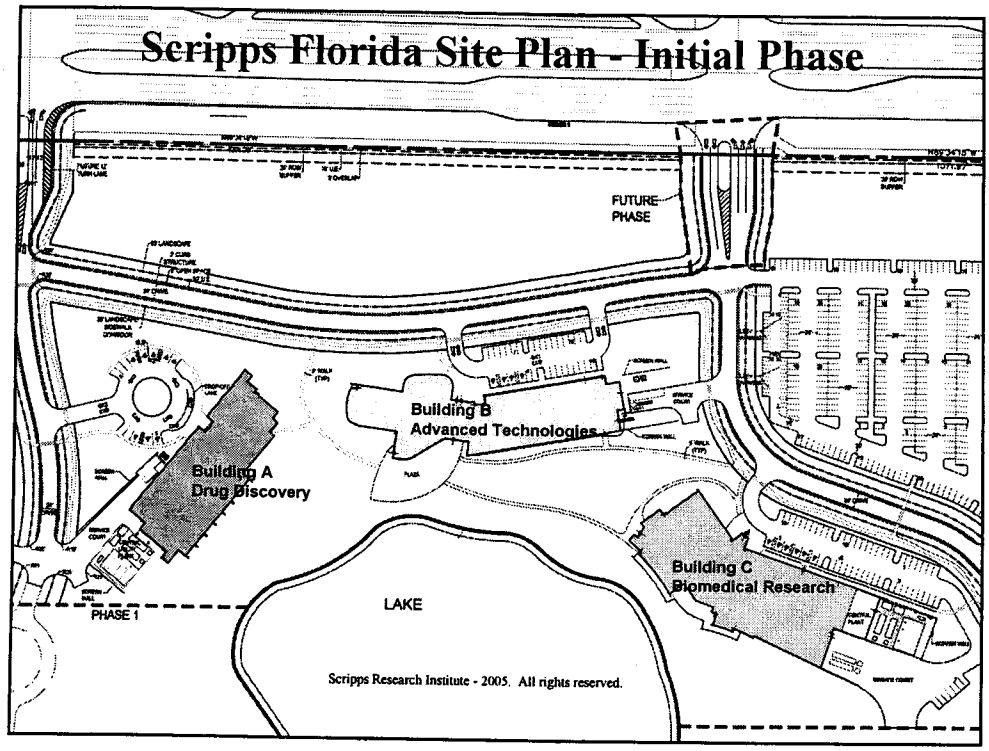
Scripps Florida - Permanent Facilities


Scripps Florida Site Plan - Initial Phase
FUTURE PHASE
Building B
Advanced Technologies
Building A
Drug Discovery
Building C
Biomedical Research
LAKE
PHASE 1
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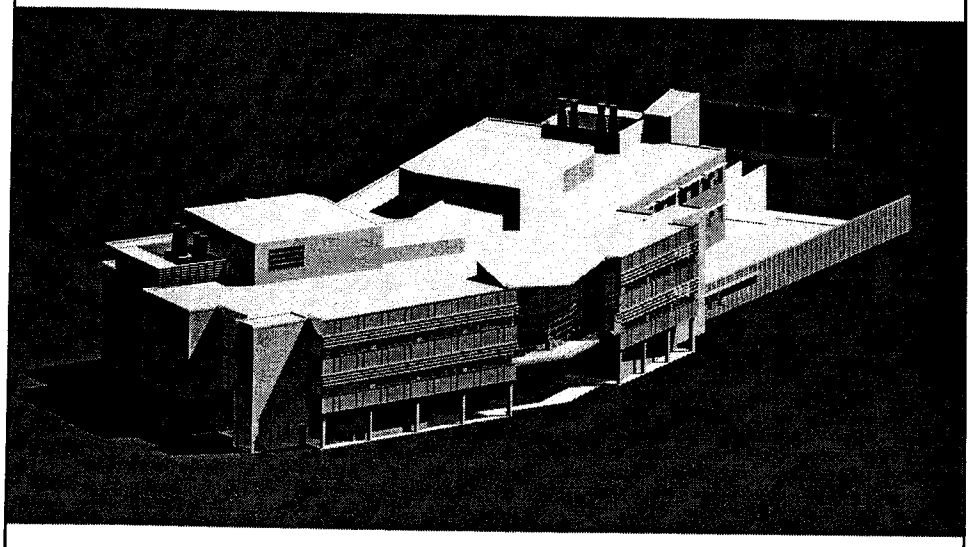
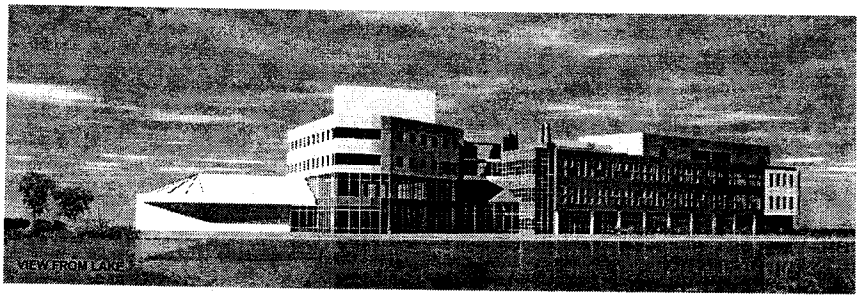
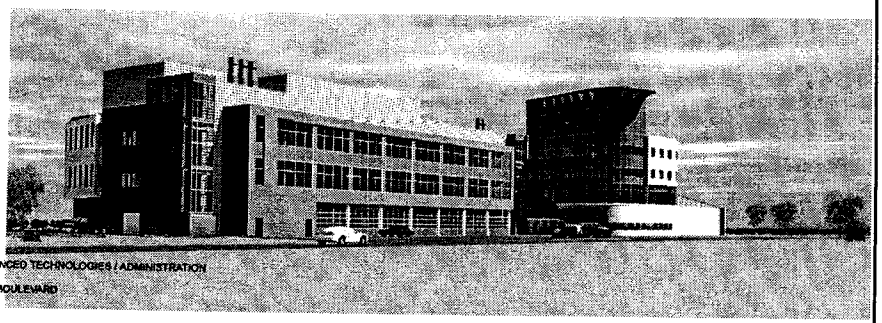
Building C - Biomedical Research



Building B – Advanced Technologies and Administration



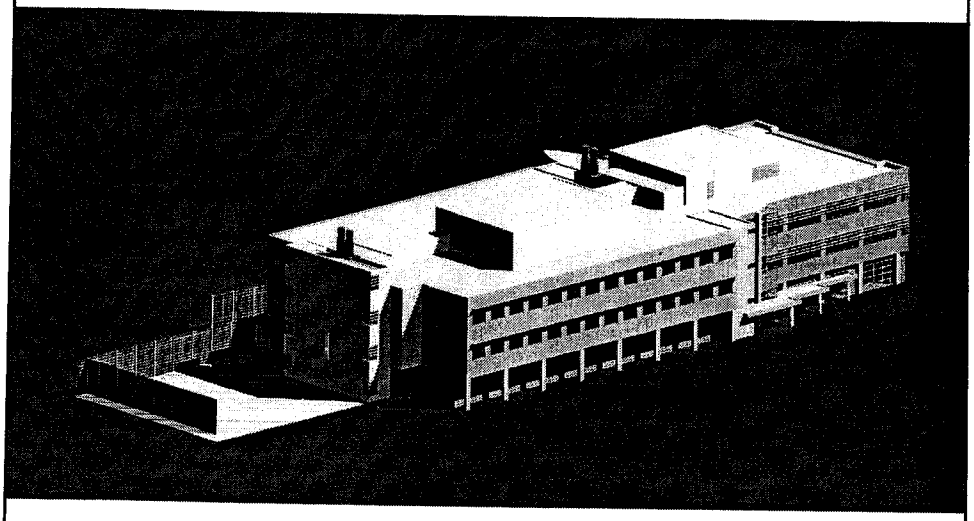
VIEW FROM LAKE



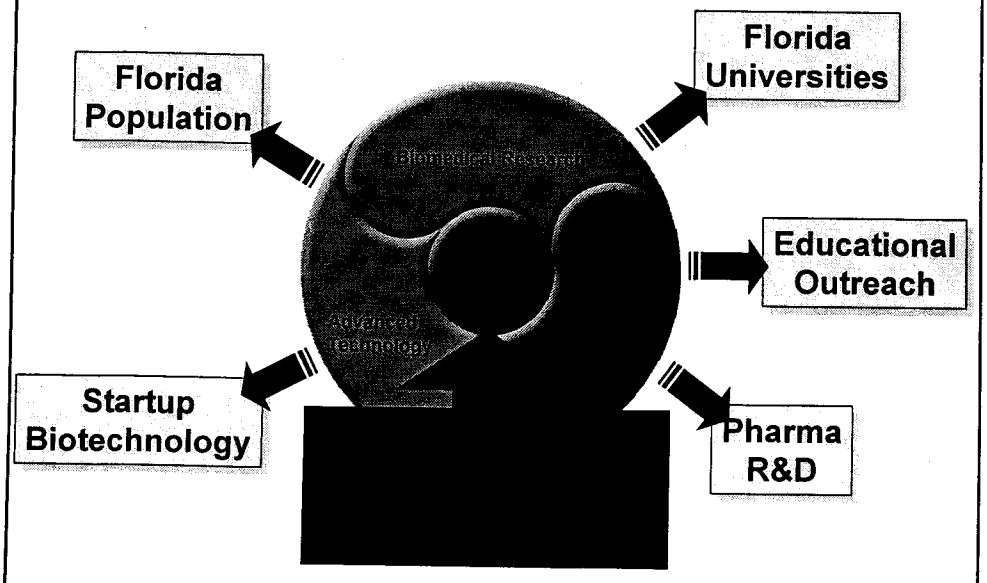
Building B - ADVANCED TECHNOLOGIES / ADMINISTRATION

VIEW FROM PGA BOULEVARD

Building A - Drug Discovery

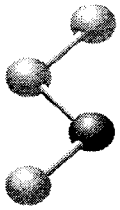


Scripps Florida
A Vision for Scientific and Economic Growth



Is It All Going To Work?
Will the Scientific and Economic Engines be Sustained?

- **Scientific**
  - **Programs and basic R&D funding will be sustained by a highly productive world-class faculty and an organization tailored to their needs**
- **Economic**
  - **Entrepreneurs and investors ----> $$ potential**
  - **$$ potential in biomedical research ----> drug discovery**
  - **Drug discovery ----> Scripps Florida**
    - doing it better, faster



SCRIPPS
FLORIDA
THE SCRIPPS RESEARCH INSTITUTE

"Florida.... is on the cusp of developing an important biopharmaceutical economy..."

Milken Institute report, "Biopharmaceutical Industry Contributions to State and U.S. Economies" **October, 2004**

Palm Beach County

Scripps Florida Partnership Program Status Report

Prepared For
The House Economic Development Committee
September/2005

Presentation Summary

- **Summary of Goals: Scripps/PBC Partnership**
- **PBC Financial Commitment to date**
- **Status Report on PBC Research Village**
- **Status Report on PBC/Scripps Partnership**
- **Litigation Update**
- **Proposals to Sell Land**

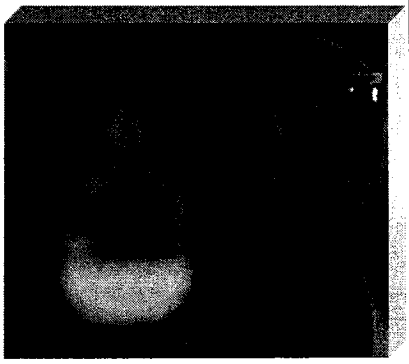
Scripps and Palm Beach County Partnership Program

- Initially 545 above-average-wage jobs. Anticipated: 2,777 high-end and/or 6,500 spin-off jobs
- Training for high school & college students & teachers

Summary of Goals:

To accomplish the vision of developing a World Class Research Park

- Viable New Economic Cluster
- Sustainable Community –
  - Live, Work, Play
- Advancements in Education
- Environmentally Conscious
- Improved Healthcare Available Locally



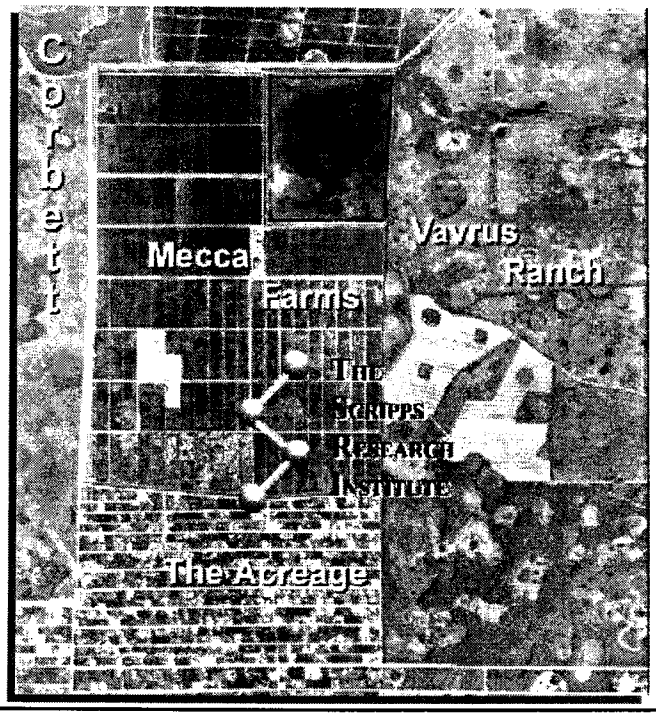
PBC Financial Commitment

- **$137 Million Scripps Research Institute**
- **$12 Million Scripps 1st Temporary Facility**
- **$13 Million Scripps 2nd Temporary Facility**
- **$125 Million for Infrastructure Improvements**
- **$1 Million for Litigation**
- **$2 Million for Developer costs**

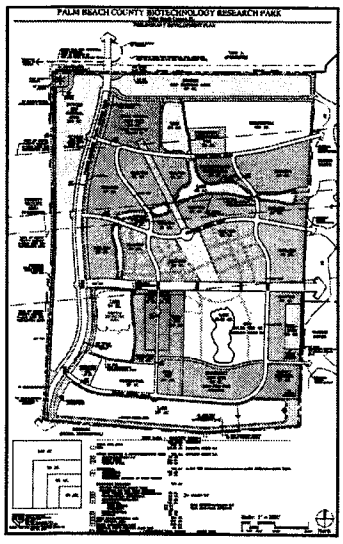
$290 Million Total

PBC Research Village Components

- **Scripps campus – 103 acres**
- **Research Hospital/Clinic**
- **Statewide University Collaboration**
- **R&D - 8.5 million square feet**
- **Retail Town Center – 430,000 square feet**
- **Residential – 2,000 residential/workforce units**



Master Plan Land Use Allocation



❖TSRI	103 Ac.
❖Schools & Universities	108 Ac.
❖R & D/Bio-Tech	516 Ac.
❖Commercial	50 Ac.
❖Residential	140 Ac.
❖Transportation network	108 Ac.
❖Created wetlands & lakes	500 Ac.
❖Open space	380 Ac.

Total – 1919 Acres Site Land

Water Management & Flow Ways

- 500 acres of lakes and flow ways
- Part of Loxahatchee River Restoration Plan
- Critical Component of the N. County Water Supply Plan

PBC Research Village

Regional/Local Planning Approvals

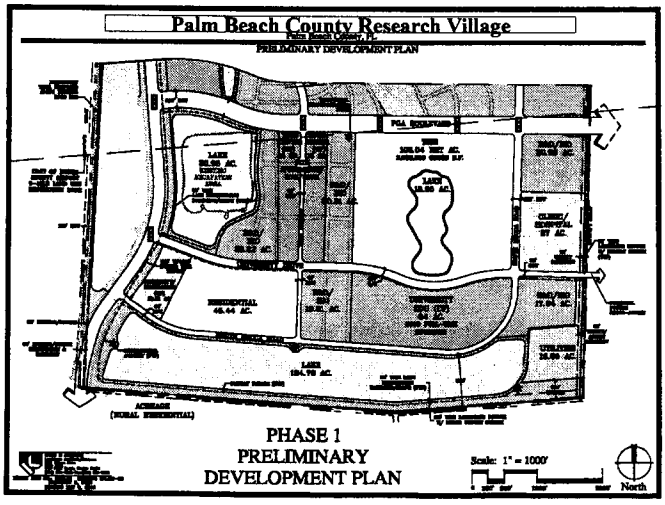
- DCA Certified Site Plan: May 9, 2005
- Comprehensive Plan now in effect
- DRI Development Order now in effect
- Final Subdivision Plan: DRO Certified
- Final Preliminary Development Plan: DRO Certified

PBC Research Village

Permitting Efforts

- ❖SFWMD Conceptual Approval Received for entire 1919 Acre Site
- ❖SFWMD ERP for Phase I Approved
- ❖ACOE Phase 1A Permit Received
- ❖ Over 32 Regulatory Permits obtained to date

PBC Research Village
Phase I Development



PBC Research Village

Phase 1 Infrastructure Components

- ❖Drainage/Stormwater Systems
- ❖Water/Wastewater: Distribution/Collection
- ❖Landscaping within Rights-of-Ways
- ❖Earthwork/Lake Excavation
- ❖Paving and Grading

PBC Research Village

Phase 1 Infrastructure Status

- ❖Infrastructure Design 100% Complete
- ❖Roadway Contracts: BCC Approved
- ❖Site Preparation Work Ongoing (Earthwork)
- ❖Infrastructure Bonds to be issued in November 2005
- ❖Construction Commencement in November 2005

Scripps Florida Permanent Facilities

- **Permanent Facilities Design Complete**
- **TSRI Site Plan: DRO Certified**
- **Building Permit Applications: Submitted**
- **Foundation Only Permit: Issued**
- **103 Acre Parcel: May 28, 2005: Turnover**
- **$137,000,000 Deposited in Escrow**

Scripps Florida Temporary Facilities at Florida Atlantic University –Jupiter, FL

- **Temp. Facility No. 1 - T1**
  - **40,000 SF**
  - **$12,000,000**
  - **March 2005**
  - **120 Employees**
- **Temp. Facility No. 2 - T2**
  - **33,000 SF**
  - **$13,000,000**
  - **Commencement: August 2005**
  - **Completion: August 2006**
  - **100 Employees**

Scripps Building Pads

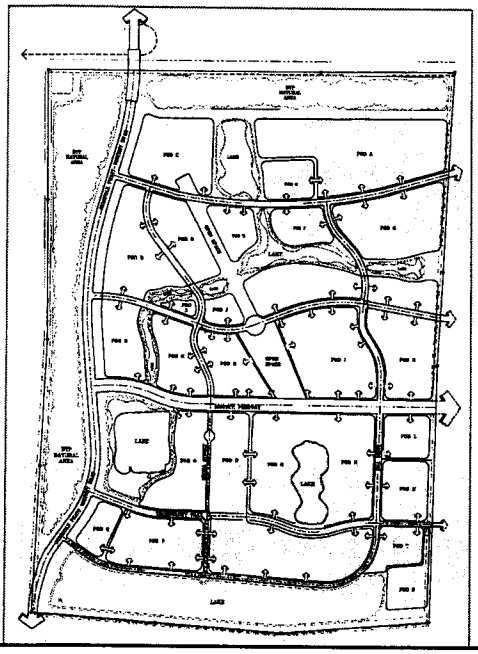
Scripps Building Pads

Litigation Update

- **5 Litigation Cases Ongoing**
- **Received 4 Favorable Judgments to Date**
- **Over 1 Million Dollars Spent to date on Litigation**
- **October 24, 2005: Mediation Scheduled in Development Order Challenge**
- **Federal Army Corp Case: Trial Scheduled for October 3, 2005**

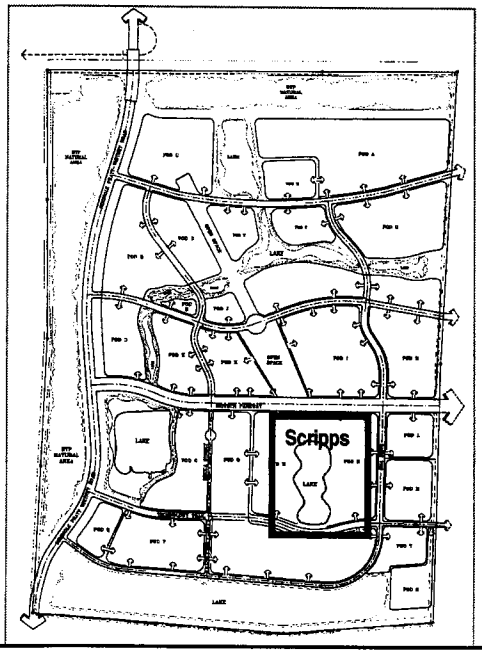
Hire Master Developer to Implement Project

- **Sell Entire Parcel – 1919 Acres**
- **Sell South Half – 886 Acres**
- **RFP Issued: October 2005**
- **Final Selection: November 2006**



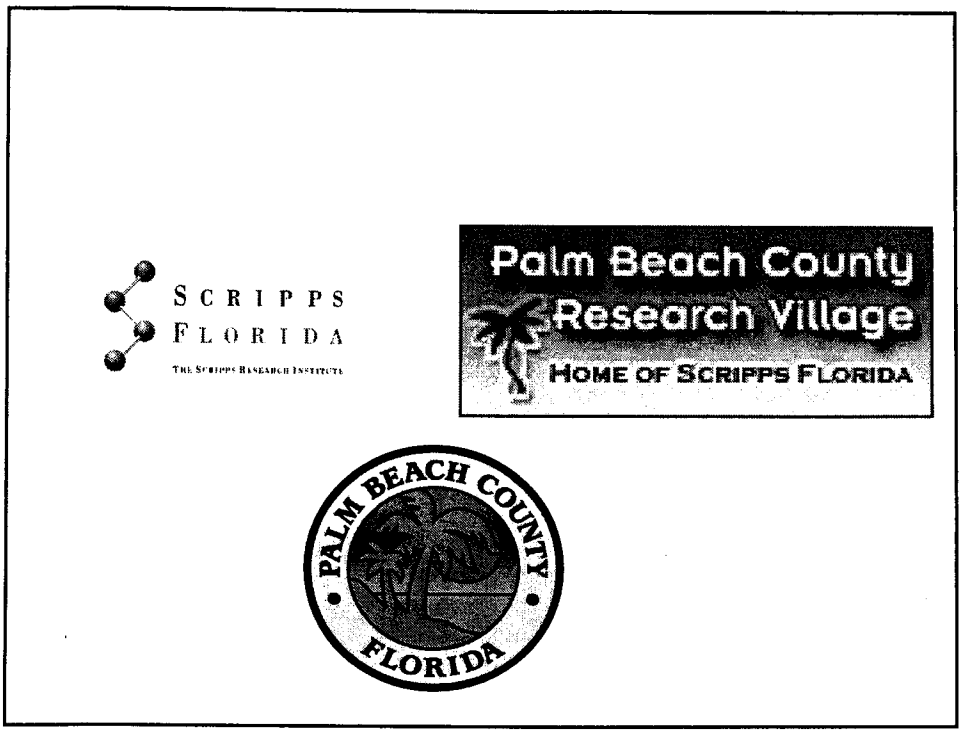
Option A: Master Developer

- **Sell 1919 acres subject to:**
  1. **DRI**
  2. **Development restrictions on use**
  3. **Economic development goals**
  4. **Grant agreement requirements**



Option B: Master Developer

- **Sell 886 gross acres subject to:**
  1. **DRI**
  2. **Development restrictions on use**
  3. **Economic development goals**
  4. **Grant agreement requirements**


SCRIPPS
FLORIDA
THE SCRIPPS RESEARCH INSTITUTE
Palm Beach County
Research Village
HOME OF SCRIPPS FLORIDA
PALM BEACH COUNTY
FLORIDA

MEMORANDUM

DATE: **September 12, 2005**

TO: **Shannon LaRocque**
PBC BioTech Research Park Program Manager

FROM: **Amy Taylor Petrick**
Assistant County Attorney

RE: **PBC BioTech Research Park Litigation Update**

Pursuant to your request for an update on the litigation, please find following a brief summary of each case involving the Biotechnology Research Park project:

Current Litigation

1000 Friends of Florida, Florida Wildlife Federation, the Jupiter Farms Environmental Council, Inc., (Loxahatchee River Coalition), Susan A. Kennedy, and Maria Wise-Miller v. Palm Beach County, Scripps Research Institute, Case No. 50 2004 CA 010993 XXXX MB:

This case involves a complaint for declaratory and injunctive relief that challenges five development orders related to the BioTechnology Research Park. The two count complaint alleges that the County improperly evaluate development orders for consistency based on a proposed amended Comprehensive Plan, rather than the existing Comprehensive Plan, and that the County engaged in illegal contract zoning by virtue of its agreement with Scripps to buy, develop, and convey the Mecca Farms site.

The County's summary judgment motion as to the contract zoning issue was heard on June 30, 2005 at 8:00 a.m., along with Scripps's Motion for Judgment on the Pleadings directed to the same issue. The County's summary judgment motion as to development order consistency, and Plaintiff's Cross-Motion for Partial Summary Judgment on the same issue, was heard on July 22, 2005 at 8:00 a.m. The County is awaiting the Court's ruling on both issues. Meanwhile, the County has taken depositions of the individual plaintiffs and Charles Pattison, Executive Director and listed expert for 1000 Friends of Florida.

Plaintiffs deposed Commissioner Karen Marcus in the case. The parties have agreed on a mediator, Simon Harrison, and have scheduled a mediation date of October 25.

Alexandria Larson & Patricia D. Curry v. Palm Beach County, Scripps Research Institute, and State of Florida, Case No. 502004 CA011575 XXXX MB:

This case involves a complaint for declaratory and injunctive relief that challenges the same five development orders raised in the *1000 Friends* case cited above. The case has been consolidated for discovery purposes only with the *1000 Friends* case cited above. In addition to the consistency challenges, the complaint also challenges funding decisions related to the BioTech Research Park project, and alleges that the development orders are inconsistent with the Comprehensive Plan. Furthermore, the complaint contains allegations that the County conspired to commit RICO violations with the State of Florida, and Scripps, and alleges the same contract zoning allegations made in *1000 Friends*.

On March 16, the Judge granted the motion to dismiss, dismissing the RICO count with prejudice and the remaining counts were dismissed without prejudice. In a separate order, the Court dismissed the case against Scripps, but granted leave for Plaintiffs to amend the RICO count and the contract zoning count. County received Plaintiffs' Amended Complaint on June 1, 2005, which re-alleges the same counts contained in the first Complaint and contains four new counts, adds as defendants, Commissioner Mary McCarty, the Business Development Board, and the State of Florida. The Court heard the County and Scripps's Motion to Dismiss the Second Amended Complaint on July 6, and the County is awaiting the Court's ruling on same.

Department of Community Affairs, 1000 Friends of Florida, Florida Wildlife Federation, Jupiter Farms Environmental Council (Loxahatchee River Coalition), Audubon Society of the Everglades, and Maria Wise-Miller v. Palm Beach County, DOAH Case No. 04-4492GM

The DCA's final order was issued on May 12 in this Comprehensive Plan administrative challenge, adopting the administrative law judge's recommendations that the County's Comprehensive Plan Amendments be found "in compliance." Petitioners appealed the decision to the Fourth District Court of Appeal. The Court has ordered an expedited review of the case. The Petitioners requested an enlargement of the page limits for the initial brief, and thereafter submitted an initial brief. The County filed a joint answer brief with the Department of Community Affairs on August 4, 2005.

Florida Wildlife Federation v. United States Army Corps of Engineers et. al., Case No. 05-80339 CIV-MIDDLEBROOKS

This case involves a challenge to the Army Corps of Engineer permit for excavation and fill for Phase One of the Palm Beach County Biotechnology Research Park. The challengers allege that the Army Corps erred by failing to require an Environmental Impact Statement, and by impermissibly segmenting the project in a way that fails to consider the complete environmental impact of the project. On June 2, 2005, the parties met with the Judge to discuss scheduling issues. The Court ordered that the parties submit a joint recommendation on whether the parties should be required to mediate by June 10, 2005.

The Court also ordered that cross-motions for summary judgment be submitted to the Court by July 25, 2005. The parties requested that the Court continue the deadline for the cross-motions, because of scheduling conflicts on the part of the parties. The Court granted the joint motion for continuance, and set a new deadline of August 8, 2005 for the initial cross motions. The initial Motions for Summary Judgment, responses to the cross-motions, as well as replies have been filed by both parties. Trial is currently scheduled for October 3, 2005.

The Army Corps filed its Answer with Affirmative Defenses on July 1, 2005. Additionally, the Petitioners and the Army Corps of Engineer filed a Joint Stipulation Respecting Documents Considered for Supplementing the Administrative Record, identifying documents that will be the subject of a Motion to Supplement the Record to be filed by the Petitioners. The Army Corps of Engineers filed an affidavit, however, asserting that none of the supplemental materials were considered by the Corps in its evaluation of the permit.

The County filed a Joint Motion to Intervene in the case, along with Scripps. The Petitioners initially indicated verbally that they would not contest the County's intervention, but would object to Scripps's intervention. Thereafter, however, Petitioners filed a response to the joint motion, opposing the County intervention, except as to the remedies phase of the trial and opposing entirely Scripps's intervention. The Court issued an order this week, denying in part and granting in part the Joint Motion for Intervention. The Court determined that the County and Scripps could only intervene at the remedies phase of the proceeding. The Court did grant the County and Scripps amicus status which, while not providing the County and Scripps the right to appeal an adverse ruling on the merits, does allow the County and Scripps the right to file briefs in support of the Army Corps position during the merits portion of the hearing. The County and Scripps have filed a joint amicus brief, which Plaintiffs have moved to strike because of the document's length. Plaintiffs have also asked the Court to schedule oral argument, but the Corps has advised the Court

that it feels oral argument is not appropriate in this case because of the time constraints of the expedited trial schedule and because review is limited to the administrative record.

Other Matters

In addition to the Scripps litigation related above, the City of West Palm Beach and the Indian Trail Improvement District has moved for a temporary injunction to restrain the installation of water utility pipes scheduled to serve the BioTechnology Research Park, as part of two consolidated lawsuits challenging the County's power to pass Comprehensive Plan Amendments relating to water service areas. City of West Palm Beach et. al. v. Palm Beach County, Case No.: 2004 CA 012091 XXXX AB. Judge Gerber heard argument on the motion for temporary injunction on April 4, and subsequently denied the motion. A renewed emergency motion for temporary injunction was filed by ITID and a Motion for Reconsideration and/or renewed motion for temporary injunction was filed by West Palm Beach. The renewed motions were argued on May 20, after which the Court issued an order denying the motions.

Lisa Lander v. Florida Department of Environmental Protection, OGC No. 05-1808
In a related administrative action, a homeowner filed a petition with the Florida Department of Environmental Protection challenging the County's permit to install wastewater pipes to serve the Biotechnology Research Park. Under Florida administrative law, the filing of the petition converts a permit of this type to "proposed agency action," thus rendering the permit temporarily ineffective. Accordingly, the work on the wastewater pipeline will be suspended until the petition is administratively resolved.

Indian Trail Improvement District has also filed a petition challenging the FDEP permit on similar grounds. A hearing on the petitions will be held this week, September 13 through 15 at the Water Utilities Department in front of Administrative Law Judge Alexander.

If you have further questions about pending Scripps/PBC BioTechnology Research Park litigation, or if I can be of further assistance, please feel free to contact me at (561) 355-3389.

Scripps Florida Funding Corporation Annual Report

For Year Ending September 30, 2004

INTRODUCTION

Florida Statute 288.955 (the "Enabling Statute") created Scripps Florida Funding Corporation ("SFFC") to facilitate the establishment and operation of a biomedical research institution for the purposes of enhancing education and research and promoting economic development and diversity. In addition, the Enabling Statute charged SFFC with the obligation to assure the compliance by The Scripps Research Institute ("TSRI") with the Enabling Statute and the agreement between SFFC and TSRI (the "Operating and Funding Agreement"). The Enabling Statute provides that SFFC shall prepare or obtain certain reports, audits, and evaluations of TSRI's compliance with the performance expectations and disbursement conditions contained in the Enabling Statute. As such, SFFC is submitting this SFFC Annual Report to the Governor, the President of the Senate, and the Speaker of the House, as required by the Enabling Statute to be submitted by December 1 of each year. This first SFFC Annual Report addresses the activities and outcomes of SFFC and Scripps Florida for the fiscal year ended September 30, 2004. The Scripps Florida Annual Report addressed the activities and outcomes of Scripps Florida for the year ended June 30, 2004, and SFFC received the Scripps Florida Annual Report on August 31, 2004. The information in the Scripps Florida Annual Report was informally updated for this SFFC Annual Report.

This SFFC Annual Report is presented in two parts: first, a summary that highlights the substantial events that have occurred in the first year; and second, an itemized report that corresponds with the applicable sections of the Enabling Statute.

SFFC Annual Report

Summary

On October 9, 2003, TSRI announced plans to establish a major science center in Florida, Scripps Florida, focusing on biomedical research, technology development, and drug design. The announcement came after months of discussions with Florida Governor Jeb Bush and state and local leaders.

Governor Bush and the Florida Legislature create SFFC

To bring TSRI to Florida, Governor Bush proposed legislation to the Florida Legislature. The Bill, and its amendments, was sponsored in the House by Representatives Detert, Gannon, Hasner, Murzin, Johnson, and Quinones. Senate sponsors were Senators Atwater, Klein, Aronberg, Fasano, and Lynn. With the help of House Speaker Byrd and Senate President King, the Enabling Statute was passed overwhelmingly by the Florida Legislature on October 23, 2003.

The Enabling Statute created SFFC, a nonprofit entity that oversees the investment and spending of the funds appropriated to the State of Florida by the Jobs and Growth Tax Relief Reconciliation Act of 2003 and thereafter appropriated by the Florida Legislature to SFFC. These funds will be disbursed to Scripps Florida in conformance with the Enabling Statute. The role of SFFC was enunciated by Governor Bush:

> "My vision for this board is that it manages the financial portion of our partnership, but lets Scripps do what it does best – conduct biomedical research."

Governor, President of the Senate, and Speaker of the House Nominate SFFC Board of Directors

SFFC comprises a nine-member Board of Directors. Three Directors were appointed by each of the Governor, House Speaker Byrd, and Senate President King. The Governor's appointees are: Dr. John Agwunobi, Secretary of the Department of Health, of Tallahassee; Ms. Elizabeth Fago, CEO of Health Care Acquistions, of Palm Beach Gardens; and Mr. Marshall Criser, immediate past Chairman of the University of Florida Board of Trustees, of Gainesville. Speaker Byrd's appointees are: Mr. Ruben King-Shaw, President of Solutions Institute, of Boston, Massachusetts; Dr. Joseph Thomas, dentist, of Vero Beach; and Mr. Chris Sullivan, CEO of Outback Steakhouse, of Tampa. President King's appointees are: Mr. Andy Crawford, CEO of Advanced Disposal Systems, of Jacksonville; Mr. Jim McCollum, Regional Director for Bell South, of Jacksonville; and Mr. Bill Foley, CEO of Fidelity National Financial, of Jacksonville. Dr. Pamella Dana, Director of the Governor's Office of Tourism, Trade, and Economic Development ("OTTED"), is an ex-officio member.

Adoption of Agreements with OTTED and TSRI to Govern Disbursement of Grant Funds

The main focus of the first 45 days of SFFC operations was negotiating and executing the Funding and Program Agreement between OTTED and SFFC and the Operating and Funding Agreement between SFFC and TSRI. During this time, SFFC held four public meetings to review drafts and provide feedback. Within the first 30 days, the Scripps Florida Business Plan, the Funding and Program Agreement between OTTED and SFFC, and a draft of the Operating and Funding Agreement between SFFC and TSRI to send to the Governor, President of the Senate, and Speaker of the House were approved. In accordance with the Enabling Statute, SFFC executed the Operating and Funding Agreement between SFFC and TSRI on January 30, 2004 to govern the disbursement and use of funds for 20 years.

TSRI and SFFC Nominate Floridians to TSRI Board of Trustees

In accordance with the Operating and Funding Agreement between SFFC and TSRI, SFFC has the right to nominate two people to TSRI Board of Trustees. SFFC began contemplating nominees immediately after the execution of the Operating and Funding Agreement between SFFC and TSRI at the January 30, 2004 meeting, with the goal of having two nominees to recommend to TSRI in time for TSRI's May 2004 Board of Trustees meeting. On May 10, 2004, SFFC nominated Dr. Phil Frost and Mr. Michael Cook. SFFC has made TSRI aware that it is unfortunate that the vetting process, including conflicts of interest disclosure and management, undertaken by TSRI's Trustee Nomination and Review Committee was not completed in time for the Board to take action at its May 17, 2004 meeting. However, the nominees were elected to the TSRI Board at its next meeting on September 13, 2004. Dr. Frost and Mr. Cook both participated in that meeting.

Dr. Frost, of Miami, is the Chairman of the Board and CEO of IVAX Corporation and Chairman of IVAX Diagnostics. Dr. Frost is also a Clinical Professor of Dermatology at the University of Miami School of Medicine, a Director of Northrup Grumman Corporation, a Governor of the American Stock Exchange, a Trustee for the Miami Jewish Home & Hospital for the Aged, and a member of The Florida Council of 100. Dr. Frost received his undergraduate degree from University of Pennsylvania and his M.D. from Albert Einstein College of Medicine, in NY. Dr. Frost serves on the TSRI Audit Committee.

Mr. Cook, of Connecticut and Palm Beach, retired as Chairman and CEO of Deloitte & Touche, LLP, in 1999. Mr. Cook is Chairman of the GAO Accountability Advisory Panel; a member of the Board of Directors of The Dow Chemical Company, International Flavors & Fragrances, Northrop Grumman Corporation, and Comcast Corporation; and an Independent Trustee and member of the Board of The Fidelity Group of Mutual Funds. Mr. Cook is Chairman Emeritus of the Board of Catalyst, the nation's leading organization for the advancement of women in business, and a member of the Business Advisory Board of the University of Florida, from which he graduated with honors in 1964. Mr. Cook serves on the TSRI Executive Committee.

In addition to the installation of the two SFFC nominees, TSRI elected two additional residents of Florida and Palm Beach County: Mr. Alexander W. Dreyfoos, Jr. at its February meeting; and Mr. Lawrence De George, at its September meeting; to TSRI Board of Trustees. Mr. Dreyfoos founded, owns, and directs The Dreyfoos Group, a private capital management firm. Mr. Dreyfoos is Chairman of the Raymond F. Kravis Center for the Performing Arts and is a lifetime trustee of the Massachusetts Institute of Technology, from which he holds a B.S. degree in addition to an M.B.A. from Harvard Business School.

Mr. De George is the Chairman and CEO of LPL Investment Group Inc. and LPL Group Inc., a private venture capital firm with investments in telecommunications, biotechnology, internet infrastructure, information display screens, and financial services. Mr. De George is a Director and the founder of iPlan Networks and Advanced Display Technologies Inc., the Chairman and founder of Cervalis LLC, and the Chairman and General Partner of Home Source Capital Mortgage Ltd. Mr. De George has a V.M.D. from University of Pennsylvania.

TSRI selects Palm Beach County as Permanent Home for Scripps Florida

TSRI selected Palm Beach County ("PBC") as its choice for the location of Scripps Florida on October 10, 2003.

Temporary Facilities Established at Florida Atlantic University

The first planned temporary facilities for the Scripps Florida space are located on the Boca Raton campus of Florida Atlantic University ("FAU"). Pursuant to an Agreement with FAU, chemistry, biology, and vivarium spaces were made available. The laboratories were used in existing condition, and no improvements were required. As of September 30, 2004, there were 18 scientific staff working in these temporary facilities. In addition, space was leased in the Regent Financial Building at 1555 Palm Beach Lakes Boulevard, West Palm Beach, for the administrative requirements of Scripps Florida.

A second planned temporary facility for Scripps Florida is being constructed at FAU's MacArthur campus in Jupiter, per a second Collaboration Agreement with FAU. These temporary facilities will comprise a two story, 41,500 gross square foot, "L" shaped building, designed and constructed under the supervision of the FAU Campus Architect. The Design Team and Construction Team was proposed to Scripps by the Campus Architect and, as part of the section process, consideration was given to each team's experience with laboratory facilities. Trailers will be required to house bioinformatics, administration, and conference rooms. The temporary facilities are expected to be completed in January 15, 2005 with occupancy by January 31, 2005.

Permanent Facilities to be Built on Mecca Farms

Immediately after the PBC Business Development Board ("BDB") signed contracts with Mecca Farms ("Mecca") to purchase 1,920 acres and concurrently with the negotiation of the Operating and Funding Agreement between SFFC and TSRI, TSRI negotiated a Grant Agreement with PBC. On February 9, 2004, TSRI signed the Grant Agreement with PBC. Pursuant to the Grant Agreement, PBC agreed to cooperate in the planning, permitting,

design, and construction of, and contribute $137 million toward, a 364,000 square foot, state-of-the art permanent facility. PBC also agreed to buy Mecca for $60 million and donate 100 acres of land on Mecca for the new Scripps Florida campus to be occupied in late 2006. In order for PBC to buy the Mecca, the Mecca contract was assigned from the BDB to PBC on February 12, 2004.

In anticipation of the completion of the Grant Agreement with TSRI and assignment of Mecca to PBC, PBC entered into a Memorandum of Agreement ("MOA") with OTTED with respect to the Expedited Permitting Review Process on November 18, 2003. The Expedited Permitting Review Process was created by Section 403.973, Florida Statutes, and was amended to provide for projects that are part of the state-of-the art biomedical research institution and campus under the Enabling Statute are eligible for the Expedited Permitting Review Process. The Legislature and Governor recognize the importance of attracting and retaining businesses that create jobs, pay high wages, and strengthen as well as diversify the economy and the workforce and recognize that these projects often involve activities requiring several permits and frequently trigger a series of regulatory reviews, many of which have overlapping reviewing authority of federal, state, regional, and local governmental entities. Therefore, the Expedited Permitting Review Process provides for an expedited review for the necessary permitting and comprehensive plan amendment process for projects that are eligible such as the state-of-the art biomedical research institution and campus ("PBC Biotechnology Research Park").

In accordance with Operating Procedures outlined in the MOA between OTTED and PBC, PBC submitted the project description form on February 27, 2004 to OTTED, and in accordance with the Operating Procedures, the pre-application meeting was held on March 10, 2004 with the reviewing agencies to outline a list of permits and approvals required for the project. Within 30 days after the pre-application meeting, a statement of the project's permitability and identification of permits and approvals required was issued. Since then, PBC has agreed to take and will continue to take the appropriate measures to apply for the required permits.

Since the proposed development exceeds the threshold set forth by the State of Florida, Fl. Statute 380.06, it must therefore be considered as a Development of Regional Impact ("DRI"). The Treasure Coast Regional Planning Council ("Regional Planning Council") conducted a Pre-Application for Development Approval ("ADA") workshop on March 29 and 30, 2004 in order to assist in the preparation of the ADA. PBC submitted its ADA to the PBC Board of County Commissioners ("PBC Commission") and The Regional Planning Council on May 10, 2004. The Regional Planning Council reviewed the ADA in a public hearing on July 16, 2004 pursuant to Chapter 380.06(12), Florida Statutes and 9J-2.024(1) of the Florida Administrative Code. The Regional Planning Council issued a final DRI Assessment Report on July 30, 2004. The PBC Zoning Commission also reviewed the ADA on August 16, 2004 and voted unanimously for approval subject to all amended conditions. The approval process for the DRI requires one public hearing with the PBC Commission, but two public meetings were held. The first public hearing was originally scheduled for September 15, 2004 and was rescheduled for September 20, 2004, due to Hurricane Frances. The second public hearing was originally scheduled for September 30, 2004 and was rescheduled to October 5, 2004, due to Hurricane Jeanne. Ultimately, the PBC Commission voted to approve the PBC Biotechnology Research Park DRI on

October 13, 2004. In its Development Order, the PBC Commission revised the maximum square feet for bio-tech from 10.5 million square feet to 8.5 million square feet.

Along with the ADA, PBC submitted the Scripps-related comprehensive plan amendments to the PBC Planning Department on May 10, 2004. The PBC Land Use Advisory Board reviewed the comprehensive plan amendments on June 11, 2004 and approved them with modifications. The PBC Commission voted to transmit the Scripps-related comprehensive plan amendments to the Department of Community Affairs ("DCA") on June 28, 2004. After DCA issued its Objections, Recommendations, and Comments ("ORC") Report on August 2, 2004, PBC staff addressed DCA's comments, and the PBC Commission voted to adopt the Scripps-related comprehensive plan amendments on October 13, 2004. On November 16, 2004 DCA found the Scripps-related comprehensive plan amendments "Not In Compliance" because PBC has not yet adopted its updated Capital Improvement Element to support the Scripps-related comprehensive plan amendments. DCA sent the ORC Report with regards to the Capital Improvement Element of the comprehensive plan on November 15, 2004 (was delayed approximately 30 days due to supplemental order extending the Regional Planning Council review due to Hurricane Frances). PBC Commission will hold a second public hearing on the Five Year Road Program on December 7, 2004 which is required for the PBC Commission to consider adoption of the Capital Improvement Element of the comprehensive plan on December 13, 2004. Shortly thereafter, if DCA finds the Scripps-related comprehensive plan amendments in compliance, the Development Order will be approved.

In addition to the DRI and comprehensive plan amendments, PBC submitted a petition for rezoning of Mecca on June 2, 2004. The PBC Zoning Commission reviewed the petition on August 16, 2004 and voted to recommend approval of the petition for rezoning. Similar to the DRI and comprehensive plan amendment process, two public hearings are required and were held concurrent with the DRI public hearings on September 20 and October 13, 2004. Ultimately, the petition for rezoning was approved by the PBC Commission on October 13, 2004. On November 21, 2004, two lawsuits were filed in PBC Circuit Court by the Florida Wildlife Federation, 1000 Friends of Florida, the Jupiter Farms Environmental Council and a Jupiter Farms resident. The first, a complaint for declaratory and injunctive relief, alleges that PBC's approval of development orders and the changes to zoning is inconsistent with the current comprehensive plan, and the second, a writ of certiorari, alleges that PBC was biased when approving the development order and zoning changes since PBC is also the developer.

In conjunction with the adoption of the DRI, comprehensive plan amendments, and the petition for rezoning, the South Florida Water Management District ("SFWMD") granted overall conceptual approval for the Environmental Resource Permit ("ERP") and construction and operation approval for the first phase of the surface water management system for the PBC Biotechnology Research Park on August 11, 2004. PBC will need to obtain construction and operation approvals for future phases. The Palm Beach Environmental Coalition challenged the ERP. The administrative hearing originally scheduled for September was postponed due to the hurricanes. The Division of Administrative Hearings Administrative Law Judge ("ALJ") reviewed the first week of November 2004 and will issue a proposed final order by mid-December at the earliest. SFWMD Board of Directors will ultimately make a decision after receiving the ALJ's

proposed final order. The United States Army Corps of Engineers permit which is required for initial site excavation and earthwork is dependent upon the ERP and therefore has subsequently been delayed. The SFWMD Board of Directors approval can be challenged at the Fourth District Court of Appeals.

The DRI Development Order, comprehensive plan amendments, petition for rezoning, and ERP are the first of several permits required by federal, state, regional, and local governmental entities. Federal permits that will be required include an Individual Permit from the United States Army Corps of Engineers. State permits included National Pollutant Discharge Elimination System Stormwater Construction Permits, Sanitary Sewer and Domestic Water Collection Permits, and Air Construction and Operation Permits from the Florida Department of Environmental Protection; Right-of-way, Drainage Connection, Utility, Landscape and Water Resource Permits from the Florida Department of Transportation; and Drinking Water Supply, Air Pollution Control, Hazardous and Biomedical Waste and Childcare Facilities from the Florida Department of Health. Building permits will need to be issued by PBC in conjunction with Vegetation Removal Permits.

While PBC was preparing the ADA, comprehensive plan amendments, petitions for rezoning, and ERP, TSRI focused on selecting world-renowned firms to help design and manage construction of its state-of-the-art laboratories and support space to be located at the PBC Biotechnology Research Park. On March 11, 2004, TSRI selected Zeidler Partnership/Bohlin Cywinski Jackson Joint Venture, including 10 Florida-based partners, to design the facilities and campus, and Fluor Corporation's team, which includes two Palm Beach partner firms, to oversee development and construction. The two teams were selected by a steering committee of Scripps senior executives, scientists, Trustees, and local Palm Beach experts from 23 design and architecture firms and 16 program management companies that responded to TSRI's Request for Proposal. Once work was underway on the conceptual, schematic designs for the campus and its facilities, TSRI received proposals from firms to act as construction manager for the 364,000 square foot permanent facility. On July 16, 2004, TSRI selected the joint partnership of the Weitz Company of West Palm Beach and DPR Construction, Inc. to act as construction manager.

During the report period and commencing about July 1, 2004, the site of the permanent facility was placed at issue despite the existing contract. Despite the good progress theretofore made including the approvals of the ERP, DRI, comprehensive plan amendments, and the petition for rezoning, some members of the PBC Commission are still discussing other sites. The continuing discussion of alternative sites may have eroded public support and may have caused interveners to believe that their cases have strengthened. PBC's request for a 90 day force majeure delay as a result of the postponement of the ERP challenge administrative hearing and the postponement of the approval of the Capital Improvement Element of the comprehensive plan could ultimately delay the completion of the permanent site. SFFC has not yet considered whether this requested extension is in accordance with the Operating and Funding Agreement and has not yet decided if and how the delay will impact funding for the upcoming years.

During the discussion of alternative sites, Scripps Florida did not have an administrative and/or public relations person available "on the ground" on a daily basis. SFFC advised

Scripps Florida that they would have been better served if Scripps Florida had elected to do so. Beginning in October 2004, Dr. Harry Orf, the Vice President for Scientific Operations, arrived in PBC, and SFFC encourages him to take on this role.

The Enabling Statute contemplates the establishment of TSRI facility in Florida and requires that the State of Florida be capable of providing for significant economic development and jobs creation consistent with the investment that the State of Florida is making to locate Scripps Florida in this state. The County in which the facility is to be located should have the ability to recapture its investment in providing for the permanent facilities. Decisions effecting site selection and location need to adhere to the legislative mandate and the Governor's vision. In light of the foregoing, site selection must contemplate contiguous or neighboring properties to be developed that will enable the County and the State to recapture their investments.

Scripps Florida Recruits World Renowned Scientists

Before a shovel hit the ground, TSRI began to attract internationally renowned scientists. As of September 30, 2004, Scripps Florida advises that the following has occurred. Scripps Florida has hired 28 employees that have started and are projecting an additional 13 employees will start by the end of the calendar year 2004 for a total of 41 employees. An additional 10 employees have already been recruited to start after January 1, 2005, for a total of at least 51 employees that will start by June 2005. Among those who have started or will start, the scientific staff and some of the administrative staff and their positions and credentials are detailed as follows.

The Infectology Department

Charles Weissmann, M.D., Ph.D. (Medicine and Organic Chemistry, Zurich University), joined Scripps Florida as its first research appointment as Head of the Department of Infectology. Best known for his work on mad-cow disease, immediately prior to joining Scripps Florida Dr. Weissman was the Senior Research Scientist in the Department of Neurodegenerative Diseases at the University College, London. After beginning his career with doctoral degrees in both medicine and organic chemistry from Zurich University, he turned to the new field of molecular biology and contributed to the first cloning of alpha-interferon genes, the elucidation of the life cycle of bacteriophages, the development of site-directed mutagenesis, and the regulation of red blood cell components. More recently, he has made breakthroughs in the investigation of diseases induced by prions which includes mad cow disease in animals and Creutzfeld-Jacob disease in humans. International recognition for his work includes memberships in the Royal Society (United Kingdom) and National Academy of Science (USA) in addition to six honorary doctoral degrees. He cofounded Biogen, the first European biotechnology company.

Christopher Baker, Ph.D. (Neuroscience, Yale University), joined Dr. Weissman in April after completing his postdoctoral research at Yale University. **Peter-Christian Kloehn, Ph.D.** (Department of Toxicology, Julius-Maximilians-University, Wurzburg, German) will join and **Sukhvir Mahal, Ph.D.** (Neurogenetics Department, Imperial College School of Medicine, University of London) has joined Scripps Florida after completing their postdoctoral research fellowships at University College London's Institute of Neurology.

They were be joined by **Prem S. Subramaniam, Ph.D.** (Microbiology, University of Florida) on September 1. **Cheryl Demcyk** and **Alexandra Sherman** are research assistants in the Infectology Department.

The Genomics Disease Informatics Program

Nikos Tsinoremas, Ph.D. (Biochemistry and Molecular Biology, University of Leeds, England) arrived at Scripps Florida in July to lead the Genomics Disease Informatics Program Dr. Tsinoremas was most recently the Director of Computational Genomics and Genomic Discovery at Rosetta/Merck. **Bruce Pascal** is a data architect, and **Joel Zysman** is the manager of scientific computing in The Genomics Disease Informatics Program.

The Genetics of Complex Diseases Program

Mathew Pletcher, Ph.D., (Human Genetics, Johns Hopkins University) is currently a postdoctoral research at the Genomics Institute of the Novartis Research Foundation and will arrive at Scripps Florida in November.

The Cancer Biology Program

Nagi George Ayad, Ph.D. (Cell Biology, Yale Medical School) was named the Assistant Professor of the Cancer Biology Program. Dr. Ayad is currently completing his postdoctoral research at Harvard Medical School until the end of the year when he will join Scripps Florida.

The Proteomics Program

Jennifer Caldwell Busby, Ph.D. (Chemistry, University of Virginia), previously a Senior Research Scientist at MDS Proteomics, joined Scripps Florida as Associate Director of Proteomics.

The Nuclear Hormone Receptors Program

Patrick R. Griffin, Ph.D., was appointed Professor and Head of Drug Metabolism and Pharmacokinetics in the Drug Discovery Division. Most recently Chief Scientific Officer and Vice President of Research at ExSAR Corporation, an early stage biotechnology company, he lead a team to establish a nuclear receptor drug discovery program resulting in a number of technology partnerships with leading pharmaceutical firms. Dr. Griffin was also a Senior Director in the Basic Chemistry Department and of Molecular Profiling Proteomics at Merck where he directed more than 40 scientists on applying a wide range of technologies to the drug discovery process and was responsible for the development of technology to rapidly characterize very large sets of chemical compounds and large collections of natural products. Dr. Griffin earned his Ph.D. in Chemistry at the University of Virginia and was a Postdoctoral Fellow at the California.

Scott Busby, Ph.D. (Molecular Biology and Biochemistry, SUNY at Stony Brook) just completed his postdoctoral research at the University of Virginia and **Michael Chalmers,**

Ph.D. (Chemistry, University of Manchester Institute of Science and Technology, UK) just completed his postdoctoral research at the National High Magnetic Field Laboratory site at Florida State University.

The Drug Metabolism and Pharmacokinetics Program

Dr. Griffin will also be heading the Drug Metabolism and Pharmacokinetics Program and will be joined by **Li Lin, M.S.** (Analytical Chemistry, University of Georgia) in September, who has more than 12 years of experience in analytical chemistry at a number of pharmaceutical and biotechnology companies, including Pfizer.

The Diabetes and Obesity Program

Most recently a Senior Research Associate at the Salk Institute, **Teresa Reyes, Ph.D.** (University of Wisconsin), was named Assistant Professor in the Division of Biomedical Science. Dr. Reyes was recently awarded a five-year Mentored Research Scientists Development Award grant from the National Institute of Diabetes and Digestive and Kidney Diseases. Dr. Reyes did her postdoctoral training at the Salk Institute, focusing on changes in appetite and metabolism. Dr. Reyes will join Scripps Florida in November.

The Medicinal Chemistry Program

Chris Liang, Ph.D. (Chemistry, Princeton University), was named Associate Director of Medicinal Chemistry in the Division of Drug Discovery. Prior to joining Scripps Florida in April, Dr. Liang spent five years at Accelrys, a leading software provider for molecular modeling and drug design, and SUGEN, a pioneer in the research and drug discovery on protein kinases. **Marcel Koenig, Ph.D.** (Chemistry, ETH Zurich, Switzerland) comes to Scripps Florida from ARYx Therapetuics in Santa Clara, California.
Yangbo Feng, Ph.D. (Organic Chemistry, University of California, San Diego) was previously a Staff Scientist in the ChemRx Division at Discovery Partners International in San Diego. **Tomas Vojkovsky, M.S.** (Chemistry, Harvard University) has worked as a professional chemist at a wide variety of pharamaceutical and biotechnology companies, including Celera Genomics and Pharmacia-Pfizer. **Thomas Schroeter** is a Staff Scientist in the Medicinal Chemistry Program.

The Cell-Based Screening Program

A native of Gainesville, **John Hogenesch, Ph.D.** (Northwestern University), was named Associate Professor and Associate Director of Genome Technology, Divisions of Biomedical Science and Technology Development. Immediately prior to joining Scripps Florida, Dr. Hogenesch served as Head of Genomics at the Genomics Institute and Assistant Professor of Neuropharmacology at TSRI where he also did his postdoctoral training, focusing on the application of emerging technologies in the study of transcriptional output of the biological clock. Dr. Hogenesch will assume his new position in December. **Josephine Harada, Ph.D.** (Molecular Biology, University of California, Los Angeles) will arrive at Scripps Florida in October after postdoctoral research at the Genomics Institute of Novartis Research Foundation in LaJolla. **Trey Sato, Ph.D.** (Biomedical Sciences,

University of California, San Diego), who is currently a postdoctoral researcher at Scripps, will arrive at Scripps Florida in December.

The HIV Therapeutics Program

James Tam, Ph.D. (Medicinal Chemistry, University of Wisconsin, Madison) will head the HIV Therapeutics Program for Scripps Florida beginning later this year after more than a decade as a Professor in Vanderbilt University's Department of Microbiology, Immunology, and Biochemistry.

Administration

Harry W. Orf, Ph.D., Vice President of Scientific Operations, arrived at Scripps Florida in October 2004 to oversee the administration and management of the scientific services that support the scientific programs. Dr. Orf joins Scripps Florida from Massachusetts General Hospital in Boston, the largest research and teaching hospital affiliated with Harvard Medical School, where he has served as Director of the Molecular Biology Laboratories for the past 21 years. Dr. Orf is also a Colonel with the 804th Medical Brigade in the U.S. Army Reserves. Dr. Orf earned a B.S. in chemistry, summa cum laude, from the University of Missouri-St. Louis and Masters and Doctoral degrees in chemistry from Harvard University.

Will Ray, Ph.D., Vice President of External Affairs, joined Scripps Florida in 2003 after serving as President and CEO of the Palm Beach County Cultural Council for 21 years. Dr. Ray did his undergraduate work at Wake Forest University in North Carolina, and earned both Master of Arts and Ph.D. degrees in English from the University of North Carolina at Chapel Hill.

Ervin Owens, Human Resources Manager, is managing non-faculty recruitment, hiring, personnel practices and policies, and staff training. Mr. Owens has more than 15 years of experience in Fortune 500 companies, most recently with Motorola, Inc., in Boynton Beach, before serving as an independent human resources consultant. Mr. Owens received a Bachelor's Degree in Education and a Master's in Education Administration from Central Michigan University.

Scripps Florida Initiates Collaboration with Florida Universities and Colleges

SFFC was concerned that Scripps Florida may not have initiated sufficient collaborative agreements with public and private Florida universities and colleges as required by its contract during the reporting period ended September 30, 2004, however, since the end of the reporting period significant progress has been made, and SFFC hopes that this progress will continue.

Scripps Florida has reached and maintained a collaboration agreement with FAU for collaborative efforts in the areas of education and research and for temporary space at the Boca Raton and Jupiter campuses. In addition to the collaboration agreement with FAU, Scripps Florida has entered into Material Transfer Agreements and collaborative arrangements for the use of technologies with Florida universities and colleges including

University of Miami, University of Florida, and Florida State University ("FSU"). In addition to these formal agreements and arrangements, .Scripps Florida reports that it has begun to discuss collaborative scientific and educational programs with many Florida colleges and universities. Scripps Florida also reports that it will establish a seminar series designed to enhance the exchange of ideas between Scripps Florida scientist and scientists from Florida universities and colleges. While a firm date for commencement of the seminar series has not been set, it will likely be after occupancy of the temporary facility in Jupiter (after February 1, 2005). Scripps Florida scientists have also given a number of seminars around the state.

Scripps Florida Generates Significant Economic Activity and Progresses toward Achieving the Projected Biotech Cluster during the First Year of Operations

SFFC asked Enterprise Florida, Inc. ("EFI") to estimate the economic impact of activities of Scripps Florida during its first fiscal year of operation, covering the period from October 1, 2003, to September 30, 2004. The impacts include direct, indirect, and induced effects. Based on all the data and assumptions incorporated into the analysis, the total statewide economic impact of Scripps Florida in this first year is as follows: 480 jobs; $17,274,217 of personal income; $42,034,531 of output (Gross State Product); and $1,576,617 in total state and local taxes. The analysis only includes economic benefits that can be quantified such as jobs, income, output, and tax revenues, and does not include other important yet unquantifiable benefits such as enhanced business visibility and marketing value (branding) that stems from having a high-profile facility such as Scripps in Florida. For EFI's complete analysis, please refer to Tab A.

SFFC asked The Washington Economics Group, Inc. ("WEG") to assess the factors affecting the progress toward achieving the projected biotech industry cluster associated with TSRI's operations in Florida, as WEG had originally projected on behalf of the Executive Office of the Governor ("EOG") on October 9, 2003. WEG's assessment dated November 23, 2004 concludes that TSRI has established operations in Florida in accordance with the September 2003 business plan submitted to EOG and that both the State and TSRI have made satisfactory progress. While WEG found that TSRI employment levels, operational expenditures, and capital spending are below the original metrics utilized in estimating first year economic impacts for EOG on October 9, 2003, WEG noted that this is due to timing issues regarding actual employment and expenditure levels and not caused by a fundamental change in TSRI's business plan. WEG expressed that the main concern going forward is the delay by PBC in obtaining the necessary permits and other actions required for starting the development of a permanent campus at the beginning of 2005. Because the establishment of a TSRI campus would allow for an acceleration of research and commercialization activities, leading the to the positive clustering impacts contained in the economists estimates on behalf of EOG beginning in the fourth year, WEG recommends intensified monitoring by the State and PBC for the timely delivery of required permits to allow the start of capital projects in 2005, the second year of Scripps Florida operations. For WEG's complete assessment, please refer to Tab B.

Conclusion

We note the good progress TSRI has made as demonstrated in this Annual Report. During this first year, SFFC and TSRI have worked to implement procedures to comply with the Enabling Statute and the Operating and Funding Agreement. SFFC will continue to work to ensure that TSRI continues to comply with the Enabling Statute and the Operating and Funding Agreement by all legal means available to them.

Scripps Florida Funding Corporation Annual Report

Itemized Report

For Year Ending September 30, 2004

INTRODUCTION

Florida Statute 288.955, referred to as the Enabling Statute, sets forth certain information that is required to be included in the SFFC Annual Report. The information that follows has been organized to correspond to the sections of the Enabling Statute that address information to be included in the SFFC Annual Report. As not every section of the Enabling Statute relates to the SFFC Annual Report, only the sections of the Enabling Statute that apply are referenced herein. For convenience, the text of the Enabling Statue that describes the information to be set forth in the SFFC Annual Report is set forth next to each Enabling Statute section reference.

Scripps Florida Funding Corporation Annual Report

Itemized Report

For Year Ending September 30, 2004

Florida Statute 288.955

Subsection (14) **ANNUAL REPORT.—By December 1 of each year, the corporation shall prepare a report of the activities and outcomes under this section for the preceding fiscal year. The report, at a minimum, must include:**

Subsection (14)(a) A description of the activities of the corporation in managing and enforcing the contract with the grantee.

SFFC Organizes

SFFC held its first meeting within 30 days of the appointment of the Board of Directors on December 16, 2003 in Tallahassee. Mr. Criser was elected Chairman, and Mr. Sullivan was elected Vice Chairman. Also at this meeting, SFFC took the steps to register, incorporate, and organize by approving their Articles of Incorporation, appointing Chairman Criser as their registered agent, and adopting their bylaws. SFFC took the steps necessary to hire the staff necessary to execute its powers and duties by approving Broad and Cassel as legal counsel, Jennie Hopkins as the Project Director to provide administrative support, and Caler, Donten, Levine, Druker, Porter, & Veil, P.A., as accountant, all in West Palm Beach. On December 16, 2003, SFFC received the $300,000 check for General & Administrative Expenses and directed Ms. Hopkins to establish money market and checking accounts at a Florida based bank.

At subsequent meetings, SFFC continued addressing organizational activities, by approving its fiscal year ending September 30 to correspond with TSRI fiscal year and purchasing Director's and Officer's Insurance.

SFFC Adopts Agreements with OTTED and TSRI

The main focus of the first 45 days of SFFC operations were negotiating and executing the Funding and Program Agreement between OTTED and SFFC and the Operating and Funding Agreement between SFFC and TSRI. During this time, SFFC held four public meetings to review drafts and provide feedback. Within the first 30 days, the Scripps Florida Business Plan, the Funding and Program Agreement between OTTED and SFFC, and a draft of the Operating and Funding Agreement between SFFC and TSRI to send

to the Governor, President of the Senate, and Speaker of the House were approved. In accordance with the Enabling Statute, SFFC executed the Operating and Funding Agreement between SFFC and TSRI on January 30, 2004 to govern the disbursement and use of funds for 20 years.

SFFC Nominates Dr. Phil Frost and Mr. Mike Cook to TSRI Board of Trustees

In accordance with the Operating and Funding Agreement between SFFC and TSRI, SFFC has the right to nominate two people to TSRI Board of Trustees. SFFC began contemplating nominees immediately after the execution of the Operating and Funding Agreement between SFFC and TSRI at the January 30, 2004 meeting, with the goal of having two nominees to recommend to TSRI in time for TSRI's May 2004 Board of Trustees meeting. On May 10, 2004, SFFC nominated Dr. Phil Frost and Mr. Michael Cook. SFFC has made TSRI aware that it is unfortunate that the vetting process, including conflicts of interest disclosure and management, undertaken by TSRI's Trustee Nomination and Review Committee was not completed in time for the Board to take action at its May 17, 2004 meeting. However, the nominees were elected to the TSRI Board at its next meeting on September 13, 2004. Dr. Frost and Mr. Cook both participated in that meeting.

Dr. Frost, of Miami, is the Chairman of the Board and CEO of IVAX Corporation and Chairman of IVAX Diagnostics. Dr. Frost is also a Clinical Professor of Dermatology at the University of Miami School of Medicine, a Director of Northrup Grumman Corporation, a Governor of the American Stock Exchange, a Trustee for the Miami Jewish Home & Hospital for the Aged, and a member of The Florida Council of 100. Dr. Frost received his undergraduate degree from University of Pennsylvania and his M.D. from Albert Einstein College of Medicine, in NY. Dr. Frost serves on the TSRI Audit Committee.

Mr. Cook, of Connecticut and Palm Beach, retired as Chairman and CEO of Deloitte & Touche, LLP, in 1999. Mr. Cook is Chairman of the GAO Accountability Advisory Panel; a member of the Board of Directors of The Dow Chemical Company, International Flavors & Fragrances, Northrop Grumman Corporation, and Comcast Corporation; and an Independent Trustee and member of the Board of The Fidelity Group of Mutual Funds. Mr. Cook is Chairman Emeritus of the Board of Catalyst, the nation's leading organization for the advancement of women in business, and a member of the Business Advisory Board of the University of Florida, from which he graduated with honors in 1964. Mr. Cook serves on the TSRI Executive Committee.

SFFC Establishes Committees

SFFC approved the formation of three committees to assist SFFC in fulfilling its statutory and fiduciary responsibilities and committee members to each such committee: the Investment Committee to review and assess SFFC's investment of the funds appropriated to SFFC; the Audit Committee to review and assess SFFC's financial information and that of TSRI and Scripps Florida, and the Reports Committee monitor the activities of Scripps Florida and review the reports prepared by SFFC and TSRI with respect to Scripps Florida.

Investment Committee

The Investment Committee was the first of the SFFC Committees to organize as the Enabling Statute requires that SFFC enter into an agreement with the State Board of Administration (SBA) under which funds received by SFFC which are not disbursed to Scripps Florida shall be invested for SFFC approval. The Investment Committee specified investment guidelines agreed to by the SBA which were incorporated into the Trust Agreement. SFFC approved the Trust Agreement with the State Board of Administration at the January 30, 2004 meeting in time for the receipt of the Grant Funds on February 3, 2004. The Investment Committee receives and reviews quarterly investment reports from the SBA to ensure that the investment options and their performance are consistent with the objectives established in the Trust Agreement and are able to make the disbursements anticipated in the Operating and Funding Agreement between SFFC and TSRI. Mr. Bill Foley is the Chairman of the Investment Committee, and Dr. Joseph Thomas and Mr. Jim McCollum are Committee Members.

Audit Committee

While the fiscal year for Scripps Florida and SFFC ends on September 30, the Audit Committee held it s first organizational meeting on April 22, 2004 to approve the mission statement and discuss which audits should be performed and by whom. Since its first meeting in April, the Audit Committee has met four times in order to agree that three separate audits are needed, define such audits, and approve such engagement letters with Caler, Donten, Levine, Druker, Porter, & Veil, P.A. During this time, Ms. Donna Weston, TSRI Chief Financial Officer, made herself in addition to TSRI's Auditors, Deloitte & Touche, and TSRI Counsel available for numerous conference calls with SFFC Counsel and Auditor to discuss the availability of information for the financial audit of Scripps Florida.

The first audit is a financial and compliance audit, report on internal control and compliance, and federal single audit of Scripps Florida

("financial audit of Scripps Florida"). The second audit is a financial and compliance audit, report on internal control and compliance, and federal single audit of SFFC ("financial audit of SFFC") included in this SFFC Annual Report in subsection (14)(g). The third audit is a contractual monitoring and compliance audit of the Funding and Program Agreement between OTTED and SFFC ("contractual monitoring and compliance audit") to address the monitoring checklist (Exhibit A-1 to the Funding and Program Agreement between OTTED and SFFC). The contractual monitoring and compliance audit will verify many of the items covered in this SFFC Annual Report, including, but not limited to: the number of jobs created and the average salaries and their consistency with the approved Business Plan; designation of a person has been designated to assist in collaborative efforts with OTTED and compliance with OTTED's requests for cooperation; purchase of equipment has been made and is consistent with the approved budget; and achievement of collaborative efforts with Florida universities.

The Audit Committee has also reviewed the unaudited quarterly financial statements required by the Operating and Funding Agreement between SFFC and TSRI for TSRI and Scripps Florida for the quarters ending March 31, 2004 and June 30, 2004. TSRI complied with additional requests of SFFC to augment the unaudited quarterly financials to include a break-out for Scripps Florida as compared to TSRI and had Ms. Weston present an overview of how the statements are structured to reflect the receipt and expenditures of grants and answer specific questions the Audit Committee had in regards to the unaudited quarterly financials. Mr. Andy Crawford is the Chairman of the Audit Committee, and Mr. Chris Sullivan and Dr. Joseph Thomas are Committee Members.

Reports Committee

The first action of the Reports Committee was to receive and review the Scripps Florida Annual Report on August 31, 2004. Not only did Scripps provide the information required by the Enabling Statute and Operating and Funding Agreement between SFFC and TSRI, but they included additional information at the request of SFFC which included information regarding compliance with the appointment of the two nominees from SFFC to TSRI Board of Trustees to which Scripps complied. The Reports Committee held its first organizational meeting on September 22, 2004 to review the Scripps Florida Annual Report for the year ending June 30, 2004, approve their mission statement; and agree to the list of items and the process required to complete this Annual Report. Dr. John Agwunobi is the Chairman of the Reports Committee, and Ms. Fago and Mr. King-Shaw are Committee Members.

SFFC Visits TSRI in LaJolla and Scripps Florida Temporary Facility and Permanent Site

In addition to their statutory obligations, the SFFC Board of Directors visited the permanent site at Mecca Farms and temporary site at FAU Boca on January 15, 2004 and conducted an informational visit to TSRI in LaJolla, California, on March 12, 2004. During their visit to TSRI in LaJolla, the Board witnessed a Robotics Demonstration by Dr. Clint Potter and Dr. Bridget Carragher; toured the labs of Dr. Hugh Rosen, M.D., Ph.D., Professor of Immunology and Chair of the Committee for Advanced Human Therapeutics and Dr. John Hogenesch, Genomics Institute of the Novartis Research Foundation; and had presentations from Dr. Sandra Schmid, Ph.D., Chair of the Department of Cell Biology and Dr. Richard Ulevitch, Ph.D., Chair of the Department of Immunology.

Subsection (14)(b) An accounting of the amount of funds disbursed during the preceding fiscal year to the grantee.

Disbursement Date	Quarterly Disbursement	Interest	Total Disbursement
2/3/2004	$ 5,200,250	$ -	$ 5,200,250.00
5/4/2004	$ 5,200,250	$ 31,034.40	$ 5,231,284.40
7/30/2004	$ 5,200,250	$ 64,657.31	$ 5,264,907.31
TOTAL	$ 15,600,750	$ 95,691.71	$ 15,696,441.71

Subsection (14)(c) An accounting of the expenditures by the grantee during the fiscal year of funds disbursed under this section.

SCRIPPS FLORIDA
Report of SFFC Grant Fund Cash Disbursements from inception to September 30,2004

Category	Amount
Salaries & Benefits	$615,853
Supplies	$563,069
Scientific Equipment	$1,623,794
External Affairs & Other Program Support	$410,186
Project Commencement, Facilities, Administration and Other Equipment	$3,031,051
	$6,243,950

This schedule reflects cash expenditures charged to the grant from the State of Florida from inception through September 30, 2004. The expense categories set forth above reflect those used by Scripps to report grant activity to grantors. This schedule excludes:

- Unpaid commitments;
- Unspent grant funds of $14,556,050 from the Year One grant of $20,800,00 (of which $15,600,750 plus interest of $95,691.71 has been received);
- Funds provided by other sources; and
- Expenditures charged against other funding sources.
- Does not include lobbying.

Subsection (14)(d) Information on the number and salary level of jobs created by the grantee, including the number and salary level of jobs created for residents of this state.

As of September 30, 2004, Scripps represents that it has employed 28 people for the Florida operation, 8 of which are residents of PBC. This number is projected to increase to 41 by the end of the calendar year 2004 and at least 51 by June 1, 2005.

The breakdown at September 30, 2004 by employment category is as follows:

Category		Average Annualized Full Time Equivalent Salary
Professor	2	$260,000.00
Research Faculty	4	$135,307.60
Scientific Staff	5	$75,200.00
Research Associates (Postdocs)	2	$46,500.00
Research Assistants	6	$75,008.51
General Administration	9	$87,555.48

Average annualized (full time equivalent salary) is $98,867.17.

Subsection (14)(e) Information on the amount and nature of economic activity generated through the activities of the grantee.

See Tab A for "The Economic Impact of Scripps Florida on Florida's Economy October 1, 2003 – September 30, 2004" prepared by EFI for SFFC November 2004.

Subsection (14)(f) An assessment of factors affecting the progress toward achieving the projected biotech industry cluster associated with the grantee's operations, as projected by economists on behalf of the Executive Office of the Governor.

See Tab B for "An Assessment of Factors Affecting The Progress Toward Achieving The Projected Biotech Industry Cluster Associated With TSRI's Operations In Florida: First Year Analysis" by WEG November 23, 2004.

Subsection (14)(g) A compliance and financial audit of the accounts and records of the corporation at the end of the preceding fiscal year conducted by an independent certified public accountant in accordance with the rules of the Auditor General.

See Tab C for the "Audited Financial Statements and Supplementary Information" for SFFC for the period ended September 30, 2004.

Subsection (14)(h) A description of the status of performance expectations under subsection (9) and the disbursement conditions under subsection (10).

Subsection (9) PERFORMANCE EXPECTATIONS.

Subsection (9)(a) The number and dollar value of research grants obtained from the Federal Government or sources other than this state.

Nothing to report as of September 30, 2004.

Subsection (9)(b) The percentage of total research dollars received by The Scripps Research Institute from sources other than this state which is used to conduct research activities by the grantee in this state.

Nothing to report as of September 30, 2004.

Subsection (9)(c) The number or value of patents obtained by the grantee.

Scripps Florida, through Dr. Chris Liang, has acquired six Provisional Patent applications relating to hydroxyl compounds as protein kinase inhibitors. The Office of Patent Counsel of TSRI is presently in the process of converting those applications into a single utility application for filing in the United States and abroad. Once the utility application is filed, licensing and/or collaboration opportunities will be explored. No value will be determined until licensing and/or collaboration opportunities are formalized.

Subsection (9)(d) The number or value of licensing agreements executed by the grantee.

Nothing to report as of September 30, 2004.

Subsection (9)(e) The extent to which research conducted by the grantee results in commercial applications.

Nothing to report as of September 30, 2004.

Subsection (9)(f) **The number of collaborative agreements reached and maintained with colleges and universities in this state and with research institutions in this state, including agreements that foster participation in research opportunities by public and private colleges and universities and research institutions in this state with significant minority populations, including historically black colleges and universities.**

Scripps Florida has reached and maintained a collaboration agreement with FAU for collaborative efforts in the areas of education and research and for temporary space at the Boca Raton and Jupiter campuses. Pursuant to this agreement, Scripps Florida reports that a joint scientific meeting was held on October 26, 2004 featuring FAU speakers and Scripps Florida participants. As a result of that conference, two FAU labs (Dr. Lemanski and Dr. Gregg) have requested certain materials for study. Dr. Liang of Scripps Florida will be providing sample compounds for study by FAU.

In addition to the collaboration agreement with FAU, Scripps Florida has entered into Material Transfer Agreements and collaborative arrangements for the use of technologies with Florida universities. Scripps Florida has reported that it has entered into a Material Transfer Agreement with the University of Miami for the receipt of biological materials and six Material Transfer Agreements with the University of Florida. Scripps Florida has already initiated collaborative arrangements with the University of Florida for the use of magnetic resonance imaging technology and FSU for the use of mass spectrometry technology

In addition to the formal agreements and arrangements reached with FAU, University of Miami, University of Florida, and FSU. Scripps Florida reports that it has begun to discuss collaborative scientific and educational programs with many Florida colleges and universities. The leaders of the State Community College system, including Mr. Jim Horne, former Florida

Commissioner of Education, Mr. J. David Armstrong, Chancellor of Community Colleges; and Presidents of six Community Colleges met with TSRI in LaJolla on January 13, 2004. Representatives from Florida International University met with TSRI on January 26, 2004. Representatives from St. Petersburg College met with TSRI on February 26, 2004. A representative from University of Florida met with TSRI in LaJolla on March 1, 2004. On March 29, 2004, Presidents, Deans, and Senior Officers of the Historically Black Colleges met with TSRI in LaJolla On April 14, 2004, Mr. Doug Bingham and Dr. Steve Kay met with representatives from Florida's colleges and universities at a meeting hosted by United States Representative Mark Foley.

Scripps Florida also reports that it will establish a seminar series designed to enhance the exchange of ideas between Scripps Florida scientist and scientists from Florida universities and colleges. Each of the three departments of Scripps Florida will sponsor monthly scientific seminars, whereby distinguished faculty from Florida universities and colleges will be invited to Scripps Florida to speak about their research and meet with faculty staff of Scripps Florida. While a firm date for commencement of the seminar series has not been set, it will likely be after occupancy of the temporary facility in Jupiter (after February 1, 2005).

Scripps scientists have given a number of seminars around the state including Dr. Pat Griffin who participated on a panel at the Florida International University (FIU) Provost Series on August 17, 2004 and participated in a FAU Chemistry Series Seminar on September 24, 2004.

SFFC was concerned that Scripps Florida may not have initiated sufficient collaboration agreements with public and private Florida universities and colleges as required by its contract during the reporting period ended September 30, 2004, however, since the end of the reporting period significant progress has been

made, and SFFC hopes that this progress will continue.

Subsection (9)(g) **The number of collaborative partnerships established and maintained with businesses in this state.**

Scripps has entered into a contract with Alchem Laboratories Corporation of Alachua for chemical synthetic procedures for the laboratory of Dr. Liang.

In addition, members of the administrative staff of Scripps Florida have conducted outreach programs with the Palm Beach County Office of Small Business Assistance, World Trade Center, Matlz Theatre, Jewish National Fund, The Forum Club, Lupus Foundation, Siemens Corporation, Jupiter Medical Center, Northern Trust, The Rotary Club, The Science Museum, The Epilepsy Foundation, The Scholastic Achievement Foundation, and the Hispanic, North Palm Beach, and Boca Raton Chambers of Commerce.

In April, Scripps hosted a study group on Education Outreach Programs for representatives of Workforce Alliance, Children's Services Council, Urban League, United Way, Palm Beach Community College, PBC School District, PBC BDB, League of Cities, PBC Education Commission, and FAU.

Subsection (9)(h) **The total amount of funding received by the grantee from sources other than the State of Florida.**

Revenue sources other than SFFC

Contributions at net present value $1,058,000*

*The amount reported above was determined in accordance with generally accepted accounting principles. Therefore, certain non-cash items, such as promises to give, are reflected at their estimated net realizable value. Does not include $1,708,742 received from PBC prior to 9/30 and $1,282,759 received from PBC after 9/30 for expenses incurred by the Architect Engineer and Program Manager for construction of the permanent facility, pursuant to the Grant Agreement between PBC and TSRI.

Subsection (9)(i) **The number or value of spin off businesses created in this state as a result of commercialization of the research of the grantee.**

Nothing to report as of September 30, 2004.

Subsection (9)(j) **The number or value of businesses recruited to this state by the grantee.**

See Subsection (14)(f)

Subsection (9)(k) **The establishment and implementation of policies to promote supplier diversity using the guidelines developed by the Office of Supplier Diversity under s. 287.09451 and to comply with the ordinances, enacted by the county and which are applicable to this biomedical research institution and campus located in this state.**

TSRI appointed Tom Gilmartin, Director of Procurement, as interim Diversity Coordinator, until Mr. Audrick K. Dodds, formerly Director of Programs and Field Services for the Florida Regional Minority Business Council, joined Scripps Florida in September as Supplier Diversity Coordinator. Mr. Gilmartin worked to

identify small and minority- and/or woman-owned businesses that could provide Scripps Florida with goods and services and introduce these to the institution to offer them the opportunity to create on an equal basis with other vendors and develop meaningful and profitable relationships. Mr. Gilmartin has implemented policies for the purchasing department to promote supplier diversity under the applicable state and local laws. Mr. Gilmartin has three separate trips to West Palm Beach on January 17, February 14, and July 21 to participate in vendor fairs, meet with local business owners, and develop an extensive list of Florida and PBC small business owners.

Subsection (9)(l) **The designation by the grantee of a representative to coordinate with the Office of Supplier Diversity.**

Designee is Mr. Gilmartin, Director of Procurement.

Subsection (9)(m) **The establishment and implementation of a program to conduct workforce recruitment activities at public and private colleges and universities and community colleges in this state which request the participation of the grantee.**

Scripps has reported contact with higher education institutions and public training agencies in reference to workforce development (see below), but to date, no workforce recruitment activities have taken place, as Scripps feels that it would be premature.
Bethune-Cookman College
Edward Waters College
Palm Beach Community College
Broward Community College
Florida Atlantic University
St. Petersburg College
New England Tech
Tallahassee Community College
Florida A&M University
Santa Fe Community College
Florida Memorial College
Florida Community College at Jacksonville
Florida Education Commission
Chancellor's Office – Florida Community College
Workforce Florida
Bio Training Consortium
Agency for Workforce Innovation

Subsection (10) **DISBURSEMENT CONDITIONS.**

Subsection (10)(a) **Demonstrate creation of jobs and report on the average salaries paid.**

See subsection (14)(d).

Subsection (10)(b) **Beginning 18 months after the grantee's occupancy of its permanent facility, the grantee shall annually obtain $100,000 of nonstate funding for each full-time equivalent tenured-track faculty member employed at the Florida facility.**

First report due 18 months after occupancy of permanent facility

Subsection (10)(c) **No later than 3 years after the grantee's occupancy of its permanent facility, the grantee shall apply to the relevant accrediting agency for accreditation of its Florida graduate program.**

First report due 18 months after occupancy of permanent facility

Subsection (10)(d) **The grantee shall purchase equipment for its Florida facility as scheduled in its contract with the corporation.**

1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year
$10	$15	$15	$*	$*	$*	$*

The total amount of scheduled equipment purchases during Years 4 through 7 will be $5 million. Scripps shall supplement this schedule in the future to provide an allocation of such $5 million for these years.

While equipment acquisitions through September 30, 2004 total $1,687,793.44, Scripps projects total equipment acquisition in Year One to exceed $10 million.

Subsection (10)(e) **No later than 18 months after occupying its permanent facility, the grantee shall establish a program for qualified graduate students from Florida universities permitting them access to the facility for doctoral, thesis-related research.**

First report due 18 months after occupancy of permanent facility

Subsection (10)(f) **No later than 18 months after occupancy of the permanent facility, the grantee shall establish a summer internship for high school students.**

First report due 18 months after occupancy of permanent facility

Subsection (10)(g) No later than 3 years after occupancy of the permanent facility, the grantee shall establish a research program for middle and high school teachers.

Even though the first report is not due until three years after occupancy of its permanent facility, In March 2004, Bank of America Palm Beach County donated $15,000 to support two secondary school science teachers from Palm Beach County at an eight-week summer internship program at the La Jolla campus beginning that June, exposing educators to current laboratory techniques and procedures, providing information on a variety of contemporary issues in basic biomedical research, create ties and linkages to working scientists who can assist them in curriculum development, and create opportunities for teachers to share information and knowledge with their peers. Scott Morone teaches Honors and International Baccalaureate Biology and Honors Anatomy and Physiology at Atlantic Community High School in Delray Beach. Audra Davis teaches Chemistry, Environmental Science, and Integrated Science at Palm Beach Lakes Community High School in West Palm Beach.

Beginning in the summer of 2005, Scripps Florida plans to operate a pilot internship program for both high school students and science teachers at its temporary facilities on FAU's campus in Jupiter, and once the permanent campus is completed, Scripps Florida will expand the program to equal the program in La Jolla.

Subsection (10)(h) **No later than 18 months after occupancy of the permanent facility, the grantee shall establish a program for adjunct professors.**

While the first report on this subsection is not due until 18 months after occupancy of the permanent facility, TSRI reports that Scripps Florida has contacted University of Florida, University of Miami, Florida State University, and University of South Florida to propose Scripps Florida faculty as nominees for adjunct appointments, and in return, Scripps Florida has asked these same universities to nominate faculty for adjunct appointment to one or more departments at Scripps Florida.

Subsection (10)(i) **No later than 6 months after commissioning it high throughput technology, the grantee shall establish a program to allow open access for qualified science projects.**

First report due no later than 6 months after commissioning of high throughput technology

Subsection (10)(j) **Beginning June 2004, the grantee shall commence collaborative efforts with Florida public and private colleges and universities, and shall continue cooperative collaboration through the term of the agreement.**

See Subsection (9)(f)

Subsection (10)(k) **Beginning 18 months after the grantee occupies the permanent facility, the grantee shall establish an annual seminar series featuring a review of the science work done by the grantee and its collaborators at the Florida facility.**

First report due 18 months after occupancy of permanent facility

Subsection (10)(l) Beginning June 2004, the grantee shall commence collaboration efforts with the Office of Tourism, Trade, and Economic Development by complying with reasonable requests for cooperation in economic development efforts in the biomed/biotech industry. No later than July 2004, the grantee shall designate a person who shall be charged with assisting in these collaborative efforts.

TSRI designated Mr. Doug Bingham, Executive Vice President and General Counsel, TSRI, as the designee charged with assisting in these collaborative efforts.

OTTED is pleased to report that TSRI has been eager to comply with all requests for cooperation in economic development efforts to date. TSRI has gone above and beyond OTTED's requests and has also participated in several economic development efforts not at the specific request of OTTED. In January, Senior Staff Scientist Karla Ewalt spoke at the Florida Venture Capital Conference. In March, Dr. Richard Lerner, Mr. Bingham, Mr. Arnold LaGuardia, Dr. Paul Schimmel, and Dr. Peter Schultz met with representatives from EFI, PBC's BDB, BioFlorida, and OTTED to discuss the strategy for biotech cluster development. Dr. Lerner attended and participated in the Governor's briefing for venture capitalists in Miami, Florida in April. Dr. Jeff Kelly participated in EFI's Life Sciences webinar in May. In June 2004, TSRI partnered with EFI on a print ad in a life sciences publication highlighting Florida's presence at BIO2004. Dr. Schimmel was a keynote speaker at Governor Bush's reception and also spoke at the Governor's Venture Capital breakfast. Dr. Griffin participated in EFI's trade mission to Canada. Dr. Steve Kay and Keith McKeown participated in a conference call with EFI to discuss growing life sciences support. Dr. Harry Orf spoke at the BioFlorida meeting on October 18, 2004.

The Economic Impact of Scripps Florida on Florida's Economy October 1, 2003 - September 30, 2004

Introduction

This analysis is designed to address subsection (14)(e) of the 2004 Scripps Florida Funding Corporation Annual Report to the legislature:

Objective: Estimate the economic impact of activities of Scripps Florida (TSRI) during its first fiscal year of operation, covering the period from October 1, 2003, to September 30, 2004.

This analysis was conducted by Enterprise Florida at the request of the Scripps Florida Funding Corporation (SFFC). It is based on data provided to Enterprise Florida by the Scripps Florida Funding Corporation, using the industry standard IMPLAN economic impact model. The objective of this economic impact analysis of Scripps' presence in Florida has been to quantify those economic benefits that have actually accrued during the first fiscal year of Scripps' operation in the state based upon expenditures by Scripps Florida or its partners on Scripps' behalf (Florida Atlantic University and Palm Beach County). The analysis does not attempt to project future streams of benefits that might be expected as the Scripps facility in Palm Beach County draws closer to full build out, nor can it measure any non-quantifiable benefits that might accrue as a result of Florida's enhanced name recognition as an emerging hub for the life sciences.

This report is organized into the following sections:

- About Economic Impact Analysis: IMPLAN is an industry standard economic impact estimator. The specific application of this model is described.
- About the Data: The model inputs include a variety of direct expenditures by Scripps and its partner organizations (Palm Beach County and FAU).
- Results of the Economic Impact Analysis: Presentation of the key findings of the analysis.
- Extra-Model Economic Benefits: A mention of additional impacts this analysis does not capture.

About Economic Impact Analysis

Economic impact analysis measures the changes in employment, personal income, economic output (Gross State Product), and tax revenues resulting from an event or the presence of a facility in a given study area. Impacts can be measured at the county, regional (i.e. groups of counties), statewide, or national level.

Given the statewide importance of Scripps Florida and its role in putting Florida on the map as an emerging hub for the life sciences, this analysis measures the economic impact of Scripps on the entire State of Florida. In practice, however, the bulk of these quantifiable impacts will be geographically concentrated in Palm Beach County, as well as other neighboring areas in the South Florida region.

Assessing the impact of Scripps Florida's presence in our state has been carried out utilizing a standard IMPLAN economic impact model, one of the top models used in the United States for economic impact analysis.

This economic impact analysis for the most part uses the standard features of the IMPLAN model, without altering any of the model's default settings. In accordance with the particular circumstances of Scripps Florida, this analysis looks at economic impacts categorized in three different ways:

1. Based on the type of impact measured, the IMPLAN model quantifies four main categories of impacts:

    - ***Employment:*** The number of additional full-time equivalent jobs attributable to the establishment and presence of Scripps Florida in Palm Beach County.

    - ***Personal Income:*** The additional earnings pumped into Florida's economy as a result of Scripps;

    - ***Economic Output (Gross State Product):*** The increase in Florida's total economic output attributable to all these additional people working and creating value added; and

    - ***Tax Revenues:*** Additional fiscal revenues for the state and local governments generated by all the added economic activity (through taxable sales, licenses, fees, etc.).

2. Based on the round of effects analyzed, there are three categories of impacts:

    - ***Direct Effects:*** These include the economic impact of the setup and operations of Scripps Florida itself, such as jobs at the facility or at companies

responsible for designing and constructing the future Scripps facility, employee income, the total increase in economic activity associated with this, and resulting tax revenues.

- ***Indirect Effects:*** These include operating inputs (both goods and services) provided by local area businesses as a result of the operation of the Scripps Florida facility and companies responsible for designing and constructing the future Scripps facility, and all the employment, income, and tax revenues associated with this increase in economic activity.

- ***Induced Effects:*** The increase in local and state economic activity stemming from expenditures by Scripps Florida' employees and employees of other area businesses either directly or indirectly affected by Scripps Florida' local purchase of goods and services. Like Direct and Indirect impacts, Induced impacts also result in jobs, increases in the area's total Income, and augmented fiscal revenues stemming from this increase in economic activity

Every purchase in any sector of the economy creates additional spending as direct, indirect, and induced effects. This happens over and over numerous times. The repeated spending that occurs as a result of any single purchase is called the multiplier effect. In other words, money spent once by an individual or a company enables a chain reaction of new spending by other individuals and companies.

3. Finally, a unique feature of this analysis is the inclusion of, and distinction between, the following:

    - ***Scripps' Operational Impacts:*** These impacts pertain to the operations of Scripps Florida itself in its first fiscal year. In addition to Scripps' own payroll expenditure (on research, professional, and support staff), there is also the procurement of laboratory and other scientific equipment, information technology, office furniture and supplies, and various business services.

    - ***Facility-Related Impacts:*** These encompass all the economic activity resulting from expenditures on establishing the current (temporary) Scripps facility, as well as on designing and constructing the future (permanent) home of Scripps Florida. These expenditures are borne by Palm Beach County and Florida Atlantic University, in addition to Scripps Florida itself. Specific activities include carrying out land surveys, environmental impact studies, architectural designs, detailed engineering designs, site preparation and related civil works, any construction activity that may be already taking place, as well as the real estate transactions and professional/business services necessary to get the project under way.

Thus, to properly measure the total impact that the presence of Scripps is having on Florida's economy, this analysis has taken into account the operation of the temporary Scripps facility at Florida Atlantic University (FAU), plus all activities related to the establishment of Scripps permanent site in Palm Beach County.

About the Data

Any economic impact analysis can only be as good as the primary data and assumptions on which it is based. In carrying out this analysis, Enterprise Florida has relied on data provided by the Scripps Florida Funding Corporation. The data provided include all known expenditures by Scripps Florida, Palm Beach County, and Florida Atlantic University, during the fiscal year October 1, 2003, to September 30, 2004.

All expenditure data thus obtained were fed into the IMPLAN model, assigning the appropriate NAICS-based IMPLAN industry sector designation to each expenditure item. These items were then aggregated according to their characteristics to obtain the different kinds of quantifiable impacts presented in the previous section.

No data on actual Scripps-related job creation were input into the IMPLAN model. Instead, the model estimated direct employment levels (averaged out for the entire fiscal year in question) based on total expenditure levels, but in accordance with corresponding income levels determined by industry and geography. Therefore, the estimated employment impacts generated by IMPLAN should be interpreted as average annual full-time equivalent (FTE) positions, and not a snapshot of actual employment by Scripps or any other entity at any individual point in time during the fiscal year.

This analysis did not alter the default assumptions built into the IMPLAN model, such as the level of "leakage" between economic areas, population, workforce, and personal income totals (all of which come from standard U.S. Federal government data sources), or any inter-industry linkages. Relying on IMPLAN's Social Accounting Matrices, the analysis computed the various kinds of economic impacts associated with Scripps' presence in our state.

Tax impacts were also computed by the IMPLAN model, with the breakdown between local and statewide fiscal revenues being estimated by Enterprise Florida based on revenue type. For example, this analysis assumed that all tax revenues obtained through vehicle licensing fees go to the State of Florida, while all property taxes are assumed to go to local governments. Sales tax receipts are split between the state's standard 6% rate and any additional local penny options, as applicable. Likewise, all other revenues were allocated to the appropriate category.

Primary expenditure data fed into the IMPLAN model are provided in the table below:

Scripps Florida-Related Expenditures Categories, Scripps' FY 2003-04			
Expenditure Item	**Amount**		**Spent By**
Architectural & Engineering:			
Architect Engineer/Construction Manager	$	189,620	FAU
Architect Engineer	$	74,422	FAU
Architect Engineer	$	17,967	FAU
Architect Engineer & Program Manager	$	2,991,501	Scripps
Architect Engineer/Geotech Survey	$	295,906	FAU
Architect Engineer/Material Testing/Construction Manager	$	246,360	FAU
Architectural & Engineering Services Subtotal	***$***	***3,815,774***	
Design Services:			
Dunns (aerials)	$	1,175	PBC
Survey	$	133,782	PBC
Planning/Pre-Design	$	1,525,464	PBC
Design	$	541,884	PBC
Subtotal Specialized Design Services	***$***	***2,202,305***	
Construction:			
Mecca Lot Clear	$	1,395,000	PBC
Catalfumo (Construction Manager)	$	460,000	PBC
Construction Manager	$	1,311,670	FAU
Construction Manager	$	1,080,778	FAU
Construction Manager	$	728,450	FAU
Construction Manager	$	631,273	FAU
Construction Manager	$	471,735	FAU
Construction Manager	$	68,850	FAU
Construction Manager/Architect Engineer	$	520,755	FAU
Project Commencement, Facilities, Administration, and Other Equipment (legal fees)	$	2,979,957	Scripps
Subtotal Construction Activities	***$***	***9,648,466***	
Real Estate:			
Appraisals	$	68,803	PBC
BDB (reimbursement for down payment for Mecca)	$	100,000	PBC
Bond Costs	$	10,500	PBC
CB Richard Ellis (Real Estate Consultant)	$	99,000	PBC
Cypress Realty (Alternative site selection consultant)	$	28,000	PBC
Mecca Access Fee	$	500,000	PBC
Mecca Escrow	$	400,000	PBC
Minkin Purchase (replacement land for Corbett swap)	$	1,229,331	PBC
Southeast Title	$	1,000	PBC
Subtotal Real Estate	***$***	***2,436,634***	
Administrative & Professional:			
Financial Consults	$	35,500	PBC
Banker's Trust (FAU)	$	10,500	PBC
Advertising	$	6,823	PBC
Permit/Approval Fees	$	130,890	PBC
Prints	$	275	PBC
Schools	$	320	PBC
Staff - PM	$	223,399	PBC
External Affairs & Other Program Support (development brochures, marketing, communications, PR)	$	403,272	Scripps
Subtotal Administrative & Professional	***$***	***810,979***	
Scripps Operational:			
Supplies (office and laboratory)	$	553,577	Scripps
Testing Labs	$	7,200	PBC
Salaries & Benefits	$	605,472	Scripps
Scientific Equipment	$	1,596,422	Scripps
Subtotal Scientific Facility-Related	***$***	***2,762,671***	
Total Scripps-related expenditures in Florida in FY 2003-04	**$**	**21,676,829**	
Source: All expenditure data provided to Enterprise Florida by the Scripps Florida Funding Corporation.			

Results of the Economic Impact Analysis

Based on all the data and assumptions incorporated into the analysis, the total statewide economic impact of Scripps Florida in its first fiscal year of operation is summarized in the table below:

The Economic Impact of Scripps Florida on the State of Florida, Scripps' FY 2003-04				
Type of Impact	Direct	Indirect	Induced	Total
Employment Impact, of which:	***239***	***91***	***150***	***480***
Operational	21	12	18	51
Facility-Related	218	79	132	429
Personal Income Impact, of which:	***$9,185,916***	***$3,225,593***	***$4,862,708***	***$17,274,217***
Operational	$1,143,132	$457,518	$592,494	$2,193,144
Facility-Related	$8,042,784	$2,768,075	$4,270,214	$15,081,073
Output (Gross State Product) Impact, of which:	***$21,676,829***	***$7,642,334***	***$12,715,368***	***$42,034,531***
Operational	$2,762,671	$1,128,174	$1,575,463	$5,466,308
Facility-Related	$18,914,158	$6,514,160	$11,139,905	$36,568,223
Total State & Local Tax Impact, of which:	***$476,410***	***$363,058***	***$737,149***	***$1,576,617***
Operational	$18,413	$47,331	$93,192	$158,936
Facility-Related	$457,997	$315,727	$643,957	$1,417,681
Breakdown of Tax Revenues Between State & Local Gov't:				
State of Florida	$277,650	$211,589	$429,608	$918,846
Local Governments (County & Municipal)	$198,760	$151,469	$307,542	$657,771

Note: Estimated totals may not add up exactly in each case, due to rounding off to the nearest whole dollar or employee.

Summarized by type of impact, the key benefits to Florida's economy during the first fiscal year of Scripps Florida's presence include:

1. The total statewide **employment impact** of Scripps Florida was 480 jobs, of which:

   - ***Direct:*** This analysis provides two different kinds of direct employment impacts: 21 full-time equivalent positions at Scripps Florida itself, plus another 218 jobs sustained by the design and construction of Scripps' physical facilities, for an estimated total of 239 direct jobs resulting from the presence of Scripps in our state in its first fiscal year; and

   - ***Indirect and Induced:*** An additional 242 jobs throughout Florida were supported as a result of the multiplier effect.

2. The total **income impact** of Scripps Florida in its first fiscal year amounted to $17,274,217. This total includes:

   - ***Direct:*** The earnings at Scripps Florida itself and entities engaged in designing or constructing the Scripps facilities boosted Florida's total personal income by $9,185,916; and

   - ***Indirect and Induced:*** An additional $8,088,301 in personal income was produced by the ripple effect that the direct spending had through the economy.

3. The contribution of Scripps Florida's presence to Florida's total economic output (**Gross State Product**) was $42,034,531 in the first fiscal year. Of this:

   - ***Direct:*** Scripps Florida and entities engaged in designing or constructing the Scripps facilities contributed $21,676,829 to Florida's Gross State Product; and

   - ***Indirect and Induced:*** The ripple effect of Scripps' presence accounted for a further contribution of $20,357,702 to Florida's total economic output.

4. The total **fiscal** impact of Scripps Florida's presence in Florida amounted to $1,576,617 in the first year. Of this total:

   - ***Direct:*** Scripps Florida and entities engaged in designing or constructing the Scripps facilities accounted for economic activity yielding an estimated $476,410 in tax revenues for Florida's state and local governments; and

   - ***Indirect and Induced:*** The ripple effect of Scripps Florida's presence accounted for economic activity generating a further $1,100,207 in tax revenues for the state and local governments.

The approximate breakdown between fiscal revenues accruing to the State of Florida and those paid to county and municipal governments was as follows:

- ***State Taxes:*** The tax revenues going to the State Florida amounted to $918,846; and

- ***State Taxes:*** An additional $657,771 in taxes was paid to county and municipal governments as a result of Scripps Florida's presence in the state.

Extra-Model Economic Benefits

While the focus of this analysis is on measuring the economic benefits of the presence of Scripps Florida in the state during its first fiscal year, it is important to note that economic impact models such as IMPLAN by their very nature capture only the economic benefits that can be quantified – jobs, income, output, and tax revenues.

These models cannot express other important yet unquantifiable benefits such as enhanced business visibility and marketing value (branding) that stems from having a high-profile facility such as Scripps in Florida. While not immediately quantifiable, such benefits will nevertheless become evident through future streams of quantifiable economic impacts, and so should be kept in mind when attempting to gauge the total impact of Scripps Florida.

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AN ASSESSMENT OF FACTORS AFFECTING THE PROGRESS TOWARD ACHIEVING THE PROJECTED BIOTECH INDUSTRY CLUSTER ASSOCIATED WITH TSRI'S OPERATIONS IN FLORIDA: FIRST YEAR ANALYSIS

By:

The Washington Economics Group, Inc.

November 23, 2004
Amended November 29, 2004

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I. Background

A. Objective

The objective of the report is contained in the language of subsection (14)(f). The subsection states the following:

> ***"An assessment of factors affecting the progress toward achieving the projected biotech industry cluster associated with the grantee's operations, as projected by economists on behalf of the Executive Office of the Governor."***

B. Report Organization

To fulfill the objective of (14)(f) the report is divided into the following sections:

- Methodology utilized by the economists on behalf of the Executive Office of the Governor (EOG) in estimating the economic impacts of The Scripps Research Institute (TSRI) operations, and the eventual development of a biotech industry cluster during the fourth year of TSRI establishment in Florida.

- An assessment of factors, during the first year of TSRI's establishment, impacting the progress toward the projected biotech cluster. These factors include:

  - TSRI's start-up employment levels, operational expenditures and capital spending during the first year of operations compared to the metrics utilized by the EOG economists in the projections.

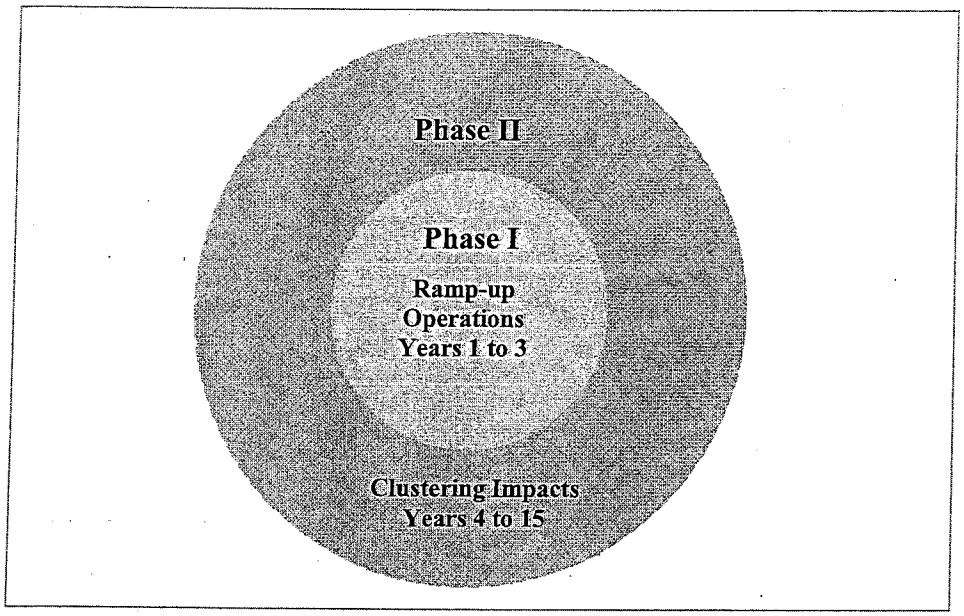
  - An assessment of actions undertaken by the State of Florida and Palm Beach County in supporting TSRI operationally, and in supporting the eventual development of a permanent campus of sufficient size to permit the projected clustering impacts contained in the economists' estimates.

II. Methodology Utilized by Economists on Behalf of EOG to arrive at Economic Impact Estimates and Clustering Projections

The methodology utilized includes two distinct phases in arriving at the projected clustering impacts. These phases, and the factors leading to the clustering impacts,

were presented by the economists working on behalf of EOG in a report entitled *"The Economic Impact of Florida FIRST Biotech Research Institute*[1]*."*

The two distinct phases highlighted in that report are as follows:



A. Phase I Factors (Years 1 to 3)

- Ramp-up operations activities and capital expenditures according to the business plan submitted to EOG in September 2003[2] by TSRI.

- Research and operations start in year one on temporary premises. Phase I is the ramp-up phase culminating in a state-of-the-art campus during the fourth year of operations. This is the year when biotech-clustering impacts are expected to commence, according to the economists' projections presented to EOG.

B. Phase II Factors (Years 4 to 15)

- The permanent campus is completed after three years. The biotech clustering impacts start to generate growing levels of economic output, jobs, labor

[1] The Washington Economics Group, Inc. *"The Economic Impact of Florida FIRST Biotech Research Institute"* October 9, 2003.
[2] *"Florida FIRST,"* The Florida Institute of Research, Science and Technology and TSRI, September 2003.

income and fiscal revenues for Florida through the fifteenth year of the estimates.

- The estimates of clustering impacts, utilizing the outcomes from TSRI's San Diego experience, lead to 499 biotech and life sciences companies within a five-mile radius of TSRI over a 15-year period.

The economic impacts developed by the economists on behalf of EOG are for the State of Florida and are not county specific. The economists utilized the widely used and professionally accepted model and Florida *input-output* coefficients contained in the Minnesota IMPLAN Group, Inc. (MIG, Inc.)[3] IMPLAN is used by over 1,000 private and public entities to estimate economic impacts, including Florida State government analysts. The IMPLAN model and software produce economic impact results for Florida, regardless of the spatial allocation of TSRI labs and facilities. Therefore, the operational and clustering estimates reflect statewide impacts. In essence, the TSRI impacts on jobs, income, output and fiscal revenues **are for the State**.

III. Phase I: Milestones and Operational Results During Year One of TSRI in Florida

This section is divided into two distinct areas. The first provides a chronology of events (milestones) reached during the first year of TSRI establishment in Florida, including an assessment of progress toward the creation of a permanent campus by the fourth year (the end of Phase I in the economists' estimates, with clustering impacts starting in Phase II, which commences in the fourth year).

The second section analyzes operational results of TSRI in year one, comparing these results to the inputs utilized by the economists modeling first-year impacts. The *inputs* (metrics) were those contained in the original (September 2003) business plan submitted by TSRI to EOG and previously discussed in the report.

A. Milestones (Factors) Achieved During Year One of Phase I.

The following tables detail the principal factors that are building the foundations for a permanent campus, with sufficient space to allow for the clustering impacts modeled by the economists starting in the fourth year of TSRI operations.

[3] See www.mig-inc.com for a description of *input-output* methodology.

Milestones in 2003

10/09/2003:	The Scripps Research Institute (TSRI) announces plans to establish science center in Florida.
10/23/2003:	Enabling Statute passes overwhelmingly by Florida Legislature, creating Scripps Florida Funding Corporation (SFFC).
10/10/2003:	TSRI selects Palm Beach County (PBC) as choice for the location of Scripps Florida.
11/18/2003:	PBC enters into Memorandum of Agreement (MOA) with OTTED for Expedited Permitting Review Process.

Milestones up to September 30, 2004

01/15/2004	SFFC approves Scripps Florida Business Plan, the Funding and Program Agreement between Governor's Office of Tourism, Trade and Economic Development (OTTED) and SFFC, and a draft of the Operating and Funding Agreement to send to the Governor, President of the Senate, and Speaker of the House.
01/30/2004:	SFFC executes Operating and Funding Agreement between SFFC and TSRI to govern disbursement and use of funds for 20 years.
02/09/2004:	TSRI signs Grant Agreement with PBC to purchase 1,920 acres of Mecca Farms. PBC agreed to cooperate in the planning, permitting, design, and construction of, and contribute $137 million toward a 364,000 ft^2 permanent facility. The permanent facility and campus are a critical factor for the establishment and expansion of the cluster projected in the economists' report.
02/12/2004:	PBC signs contract and agrees to buy Mecca for $60 million and donate 100 acres of land on Mecca for the new Scripps Florida campus to be occupied in late 2006.
03/11/2004:	TSRI selects Zeidler Partnership / Bohlin Cywinski Jackson Joint Venture to design facilities of permanent campus.
06/11/2004:	The PBC Land Use Advisory Board (LUAB) approves comprehensive plan amendments associated with PBC Biotechnology Research Park (BRP) DRI with modifications.
07/16/2004:	TSRI selects joint partnership of Weitz Campany and DPR Construction to act as construction manager of permanent campus.
07/30/2004:	The Treasure Coast Regional Planning Council (TCRPC) issues final Development of Regional Impact (DRI).
08/11/2004:	The South Florida Water Management District (SFWMD) grants overall conceptual approval for the Environmental Resource Permit (ERP) and construction and operation approval for first phase of surface water management system of PBC BRP. PBC Environmental Coalition challenged ERP.

Milestones after September 30, 2004	
10/13/2004:	PBC Board of County Commissioners (BCC) approves PBC BRP DRI and revises maximum square footage for biotech from 10.5 million to 8.5 million square feet.
11/02/2004:	The last disbursement from SFFC in the amount of $5,200,250 plus interest is received by Scripps Florida for an annual total of $20.8 million, meeting contract requirements.
11/16/2004:	Florida Department of Community Affairs (DCA) informs PBC that land-use changes are not approved due to "procedural oversight." The proposed changes do not include a capital improvement plan.
11/17/2004:	Palm Beach County's Scripps Program Manager informs TSRI that it will not deliver "a developable site" by January 3, 2005 due to hurricanes and permitting delays.

Sources: Scripps Florida Funding Corporation Annual Report (Draft of Nov. 5, 2004), SFFC e-mails and Beaudet, Mertz and Singer .

While not part of the EOG economists' projections, both Enterprise Florida (EFI) and the Palm Beach County Business Development Board (BDB) started in the first year of TSRI operations an aggressive marketing campaign to create a biotech cluster around the Scripps brand name. This is a positive development for the eventual creation of a biotech-life sciences cluster during the fourth year of TSRI operations.

The following table highlights key marketing efforts in year one by both EFI and BDB around the TSRI global brand name:

Highlights of EFI Marketing Results in Year One of TSRI

- Announced 23 location, expansion, or creation of life sciences projects
- Twenty (20) current life sciences projects + fourteen (14) potential life sciences projects
- Launched multi-media advertising campaign surrounding life sciences and Scripps
- Created life sciences / bio-tech / venture capital reports
- Developed life sciences forum with regional panelists, workshops, and speakers
- Participated in industry conferences, hosting high-profile receptions, briefings

Highlights of BDB Marketing Results in Year One of TSRI

- Provided support to four (4) life sciences / biotech firms with facility expansions recruitment, or site location
- Nine (9) current life sciences / biotech firms requesting assistance from BDB at end of year one
- Potential to create 340 jobs
- Retained 80 jobs

Sources: EFI and BDB.

Based on the milestones and marketing efforts presented, most developments are satisfactory for the completion of a permanent campus during the fourth year. However, the report notes with concern the minor delays encountered in the permitting process and in the start of capital projects necessary to build and develop a permanent campus with a growing biotech-pharma cluster in year four of TSRI operations.

The permanent campus for TSRI is critical for the Institution to act as a catalyst for the rapid development of the expected biotech-pharma cluster of companies from years four to fifteen as detailed in the economists' projections on behalf of EOG.

According to a letter submitted by the Scripps Program Manager of Palm Beach County to the Scripps Research Institute on November 17, 2004, we quote selectively:

> ***"Recent events...have caused unexpected delay in obtaining permits and approval from regional and state agencies needed to deliver a developable site by January 3, 2005...However, we fully expect to complete the infrastructure improvements by September 30, 2006."***

The letter ends by stating that the delays are temporary, due to *"the effects of two hurricanes impacting the South Florida region, which have caused interruptions to business as normal throughout the entire month of September."*

In conclusion, the development and growth of a permanent campus with clustering impacts is essential for the State to recover its investment in TSRI. Therefore, progress in the development of a permanent site for TSRI must be monitored closely by the State.

B. TSRI Operational Results in Year One

The milestones presented in the prior section have allowed TSRI to begin operations and research activities in Florida, with positive impacts on jobs, income and output in the State. The following table presents operational spending, employment and capital expenditures as contained in the Scripps Florida Funding Corporation (SFFC) Annual Report for Year Ending September 30, 2004 (Draft of Nov. 5, 2004). These results

are then compared with the inputs utilized by the economists to estimate economic impacts. These economic impacts were based on the original business plan submitted to EOG by TSRI in September 2003.

TSRI Selected Employment and Expenditures Results
(Projected *vs.* Actual)

Classification	*Projected**	*Actual*
Number of employees	31	28**
Payroll and Operational Expenses ($000's)	$ 15,825	$ 4,620***
Major Capital Expenditures ($000's)	$ 10,000	$ 1,688***

*Reflects the metrics utilized by EOG economists, and is based on TSRI original business plan.
**Reflects employees as of September 30, 2004 – not eleven months of calendar year commencing February 1, 2004 utilized in first year economic impacts.
***Reflects expenses and expenditures as of September 30, 2004 – not full twelve month grant year commencing February 1, 2004 utilized in first year economic impacts.

Source: SFFC Annual Report for Year Ending September 30, 2004 (Draft of Nov. 5, 2004).

The discrepancies in values (direct impacts) between Projected and Actual figures can be explained on the differences of **timing** involved in recording employees and expenditures.

The *input-output* models which economists use are "timeless" (impacts occur immediately), and are not based on accounting principles. In this case, projected employment was based on the calendar year (eleven months commencing February 1, 2004) and expenditures were based on the first grant year (twelve months commencing February 1, 2004) figures. **Actual** employment and expenditures in the table are based on accounting principles, and contained in the SFFC Annual Report for Year Ending September 30, 2004. These are primarily eight-month figures, not the eleven months for employees or twelve months for expenditures utilized by the economists for first year impacts.

However, SFFC reports that recent developments that will cause the **Actual** figures to be equal to, or exceed the initial economists' projections when the time periods used for the projections have elapsed. Among recent developments are the following:

- TSRI projects to have 41 employees by-end 2004, surpassing the 31 employees originally projected.

- Actual payroll and operational expenses are below projections. This is primarily due to the "timing" involved in hiring. Employees are being hired later in the year than originally projected (starting in the final quarter of 2004).

- TSRI will meet the $10 million in capital expenditures originally projected when the FAU facility in the Jupiter Campus is delivered in January 2005.

In summary, employment, payroll, operational spending and capital expenditures appear to be in line with the original business plan utilized in the economists' projections of October 2003.

IV. Conclusions Based on Results of TSRI First Year in Florida

- TSRI has established operations in Florida in accordance with the September 2003 business plan submitted to EOG. This document was utilized by economists on behalf of EOG to estimate the economic impacts over a fifteen-year period.

- An assessment of factors leading to the creation of a growing biotech cluster starting in the fourth year indicates satisfactory progress by the State and TSRI. This conclusion is based on the first year of TSRI operations, and for the State and Palm Beach County actions under the contract.

- TSRI employment levels, operational expenditures and capital spending are below the original metrics *(inputs)* utilized by EOG economists in estimating first year economic impacts. However, this is due to "timing" issues regarding **Actual** employment and expenditure levels, and not caused by a fundamental change in TSRI's business plan.

- The main concern going forward is the delay by Palm Beach County (PBC) in obtaining the necessary permits and other actions required for starting the development of a permanent campus on the Mecca Farms at the beginning of 2005.

- The establishment of a TSRI permanent campus would allow for an acceleration of research and commercialization activities, leading to the positive clustering impacts contained in the economists estimates on behalf of EOG between the fourth and fifteenth year.

- Therefore, the report recommends intensified monitoring by the State and Palm Beach County for the timely delivery of required permits to allow the start of capital projects in 2005, the second year of TSRI operations in Florida.

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J. Antonio Villamil

- Tony Villamil is Chief Executive Officer of *The Washington Economics Group, Inc. (WEG)*, serving most recently as Director of Governor Bush Office of Tourism, Trade and Economic Development of Florida. Among present State leadership positions, he serves as Chairman of the Governor's Council of Economic Advisors, is Vice Chairman of Florida FTAA, Inc. and a member of the Board of Directors of Enterprise Florida – the State's principal public/private economic development organization.

- Dr. Villamil has over 25 years of successful experience as a business economist, and as a public official of both the Federal and State of Florida governments. During 1989-1993 he served as United States Undersecretary of Commerce for Economic Affairs in the Administration of President George H. Bush, appointed by the President and unanimously confirmed by the U.S. Senate.

- He received his bachelor and masters degrees in Economics from Louisiana State University (LSU) in Baton Rouge, where he also completed coursework for the Ph.D. degree. In 1991, Florida International University (FIU) awarded him, upon recommendation of the Graduate Faculty, a Doctor of Science degree in Economics (Hon.) for "distinguished contributions to the Nation in the field of Economics."

- Tony and his family are residents of Coral Gables, Florida, where he is active in community affairs, serving on the Executive Committee of the Greater Miami Chamber of Commerce and Chairperson of the Beacon Council Economic Roundtable, among other volunteer activities.

- *The Washington Economics Group, Inc. (WEG)*, headquartered in Coral Gables, Florida has been successfully meeting client objectives since 1993 through strategic consulting services for corporations and institutions based in the Americas.

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Ana Carolina Corrales

- Miss Ana Corrales is Managing Director of Research and Client Services of *The Washington Economics Group, Inc. (WEG),* serving most recently as Executive Director of a bi-national chamber of commerce in South Florida.

- Miss Corrales has over 6 years of experience in economic research, project management, strategic/financial planning, and corporate communications and is a graduate of a management development program at a Fortune 500 energy company.

- She received her B.A. from Swarthmore College in Pennsylvania and her masters degree in Applied Economics from Johns Hopkins University.

- Miss Corrales lives with her family in Miami, Florida, where her professional activities include serving as Adjunct Professor of Economics at Miami - Dade College's School of Business.

- *The Washington Economics Group, Inc. (WEG),* headquartered in Coral Gables, Florida, has been successfully meeting client objectives since 1993 through strategic consulting services for corporations and institutions based in the Americas.

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The Washington Economics Group, Inc. (WEG) has been successfully meeting client objectives since 1993 through economic consulting services for corporations, institutions and governments of the Americas. We have the expertise, high-level contacts, and business alliances to strengthen your competitive positioning in the growing marketplaces of Florida and Latin America.

Our roster of clients, over the past eight years, includes multinational corporations, financial institutions, public entities, and non-profit associations expanding their operations in the Americas.

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Scripps Florida 2005
Annual Report and Appendices

TAB A

Scripps Florida 2005 Annual Report

SCRIPPS FLORIDA ACHIEVEMENTS

The current Fiscal Year has been a period of extraordinary achievements for Scripps Florida, particularly in the areas of faculty recruitment and hiring, governance, collaborations, funding, and outreach and education.

Highlights of each of these areas follow. (Scientific achievements have been presented in a separate publication, *Scientific Report 2004 for Scripps Florida,* a copy of which accompanies this report. The report was provided to the members of the Scripps Florida Funding Corporation in February of this year.)

SELECTED APPOINTMENTS

William R. Roush, Ph.D.

Noted chemist William R. Roush, Ph.D., joined the faculty at Scripps Florida as professor of chemistry, executive director of medicinal chemistry, and associate dean of the Scripps Florida graduate programs. His appointment was announced in September of 2004.

"Bill has been doing groundbreaking research in the analysis, structure determination, and synthesis of complex, biologically active natural products that may lead to the development of new drugs," said Scripps Research President Richard A. Lerner, M.D., in announcing the appointment. "He has also been a caring mentor for two generations of outstanding young chemists, a role he'll continue with Scripps Florida graduate students and postdoctoral fellows."

In addition to continuing his current laboratory interests, as executive director of medicinal chemistry, Dr. Roush is concentrating on further analyzing chemical compounds that have already shown potential for use in drug development, a major goal of the Scripps Florida operation.

"Professor Roush exemplifies the high bar we've set for faculty who can contribute to both basic research and drug discovery activities," Scripps Research Professor of Cell Biology Steve A. Kay, Ph.D., vice-chair of the Scripps Florida Steering Committee, said at the time.

As associate dean, he is developing and leading the Florida-based graduate programs, a part of The Scripps Research Institute's Kellogg School of Science and Technology in La Jolla. Six candidates for the Ph.D. degree are currently studying at Scripps Florida. The program is expected to expand substantially in 2007 when Scripps Florida moves to its permanent campus.

Born in California 52 years ago, Dr. Roush received his bachelor's degree in chemistry, *summa cum laude*, from the University of California Los Angeles in 1974, where he performed undergraduate work with Scripps Research Professor Julius Rebek, Jr. He received his Ph.D. degree in chemistry from Harvard University in 1977 and after an additional year as a postdoctoral associate at Harvard, he joined the faculty of the Massachusetts Institute of Technology as an assistant professor. He moved to Indiana University in 1987 and was promoted to professor in 1989 and distinguished professor in 1995. Two years later, he went to the University of Michigan in Ann Arbor as the Warner Lambert/Parke Davis Professor of Chemistry. He currently serves as chair of the Department of Chemistry at the University of Michigan.

Dr. Roush has been a Fellow of the Alfred P. Sloan Foundation, an Eli Lilly Grantee, and the holder of the Roger and Georges Firmenich Career Development Chair in Natural Products Chemistry at MIT. He received the 1992 Alan R. Day Award of the Philadelphia Organic Chemists' Club, the 1994 Arthur C. Cope Scholar Award of the American Chemical Society, and the 1996 American Chemical Society Akron Section Award.

In 1998 he received a Merit Award from the National Institute of General Medical Sciences, and in 1999 he received a Distinguished Faculty Achievement Award from the University of Michigan. In 2002 he

received the Paul G. Gassmann Distinguished Service Award of the American Chemical Society Division of Organic Chemistry. Most recently, Dr. Roush has been named the recipient of the prestigious American Chemical Society 2004 Ernest Guenther Award in the Chemistry of Natural Products.

He currently is an associate editor of the *Journal of the American Chemical Society* and is on the editorial boards of a number of major journals in his field. He serves as a consultant for several pharmaceutical companies, including Eli Lilly and Company and Pfizer, Inc. He has held a number of named lectureships around the world and has published more than 225 papers in the leading scientific journals.

Dr. Claes Wahlestedt, M.D., Ph.D.

The appointment of Claes Wahlestedt, M.D., Ph.D., an internationally recognized researcher in the field of pharmacological treatments for nervous disorders, to the Scripps Florida faculty was announced in October 2004. He was named professor of biomedical sciences and director of pharmagenomics.

Dr. Wahlestedt, 45, had previously served since as founding director of the Center for Genomics and Bioinformatics at the Karolinska Institute in Stockholm, Sweden. He was also a department chair and professor at the center.

"Claes is another shining star among the world-class scientists attracted to Scripps Florida," said Scripps Research President Richard A. Lerner, M.D., at the time of the appointment. "He will continue to make many important contributions in the fields of neurobiology and molecular pharmacology at our new facilities."

At Scripps Florida, Dr. Wahlestedt is coordinating efforts to help discover and develop novel drugs to treat diseases of the nervous system. He also has a mandate to search for individual human DNA variations and biomarkers of various diseases. Epidemiological aspects of his work will be addressed in part through continued collaboration with colleagues and institutions in Sweden.

"I'm very much looking forward to pursuing my work in Palm Beach County among some of the most respected researchers in the world," Dr. Wahlestedt said in accepting his appointment. "To be in at the beginning of this new enterprise, with all the expertise of Scripps Research behind it, is a tremendously exciting opportunity."

In recent years, Dr. Wahlestedt has been involved in post-genomic efforts aimed at discovering how genes are expressed and function in living cells. He has a long-standing interest in developing improved RNA targeting strategies through the use of antisense RNA, siRNA or small molecules that target RNA.

Dr. Wahlestedt received both his medical degree and Ph.D. from Lund University in his native Sweden. He did postdoctoral work at the Georgetown Institute of the Neurosciences at Georgetown University in Washington, D.C. (1987-88), and at the Institute for Immunology at Kyoto University, Japan (1988-89).

He then spent four years as assistant professor in the Division of Neurobiology, Department of Neurology and Neuroscience at Cornell University Medical College in New York, and was subsequently adjunct professor of biochemistry, and pharmacology and therapeutics at McGill University, Montreal. He has spent a decade directing drug discovery or genomics efforts in the pharmaceutical industry for Astra-Zeneca, Pharmacia & Upjohn, and Pharmacia Corporation.

In 2004, he was appointed adjunct chief scientist at RIKEN Genomic Sciences Center in Tokyo, Japan. He is the author of more than 150 papers in major scientific journals in his field.

Arthur "Donny" Strosberg, Dr. Sci.

In February, 2005, the Institute announced the appointment of internationally renowned biochemist Arthur "Donny" Strosberg, Dr. Sci., as professor of infectology at Scripps Florida. Dr. Strosberg, 59, has led teams that have made significant discoveries in the fields of biochemistry and immunology at the University of Paris, the Pasteur Institute and the Cochin Institute of Molecular Genetics in Paris, the Free

University of Brussels, Belgium, and Harvard Medical School and Massachusetts General Hospital, both in Boston.

In addition, he has more than 20 years experience as an investor and co-founder of biotechnology companies in the United States and Europe, most recently Hybrigenics, a privately held company he helped to establish in 1998 and where he served as chairman and chief executive officer from 1999 to late 2004.

"Donny's groundbreaking research, particularly in the areas of Legionnaire's disease, AIDS, and obesity, along with entrepreneurial skills that have led to his founding five companies, make him a perfect fit for the work we are doing at Scripps Florida," said Scripps Research President Richard A. Lerner, M.D., at the time of the announcement. "His research, combined with the latest advanced technologies, should produce significant results in fighting disease and improving human health."

"I am delighted to participate in the development of a world-class research department at Scripps Florida, as well as help create associated innovative biotechnology companies," said Dr. Strosberg.

Born in Montreux, Switzerland, in 1945 and a citizen of Belgium, Strosberg received his *License* in Chemistry in 1966 and a Doctorate in Sciences (Chemistry) in 1970 from the Free University of Brussels, Belgium. After a postdoctoral fellowship at Massachusetts General Hospital and Harvard University, he served as an instructor and later visiting professor at Harvard Medical School. He then returned to the Free University of Brussels as a professor in protein chemistry and biochemical pathology, followed by a professorship in biochemistry and immunology at the University of Paris. From 1986 to 1990, he was chief of the unit of molecular biology of receptors at the Pasteur Institute, followed by eight years as director of the molecular immunopharmacology unit and vice president of the Cochin Institute of Molecular Genetics.

Professor Strosberg has trained 45 Ph.D. candidates and nearly twice as many postdoctoral fellows. He has received numerous awards and honors from US and European scientific organizations; he holds nearly 20 issued patents, many of which have been licensed to pharmaceutical companies; he has published more than 370 scientific articles in the major scientific journals in his field.

Dr. Strosberg has more than 20 years experience investing in and co-founding biotechnology companies, including Chemunex SA, Nouveau Marché, Incyte and Praecis. He has served on the board of directors and scientific advisory boards of these and other companies, helping to complete successive private placement offerings as well as filing for IPO listings on public capital markets. He has also helped to start and run three biotech incubators. He is one of the few members from the industrial sector of the investment committee of the French government's Fund of Funds, which supports French venture capital companies.

Most recently, Dr. Strosberg has been chairman and CEO of Hybrigenics, a privately held company he helped to found in 1998, together with the Pasteur Institute. The company is a leader in functional proteomics, seeking to develop drugs against cancer, diabetes and viral diseases, with approximately 40 patent applications and a capitalization of $60 million.

Howard T. Petrie, Ph.D.

The Scripps Research Institute announced the appointment of acclaimed Florida immunologist Howard T. Petrie, Ph.D., as professor in the Division of Immunology, Department of Biomedical Sciences at the Institute's new operations in Palm Beach County in April 2005.

Dr. Petrie, 48, is a renowned specialist in the study of the processes that induce bone marrow stem cells to differentiate into T lymphocytes throughout the course of life. T lymphocytes can be lost from the body for a variety of reasons, including bleeding, aging, infection, or chemotherapy drugs. These lost cells must be replaced, and deficiencies in this process can result in life-threatening susceptibility to infection, particularly by viruses. His work focuses on understanding how T lymphocyte production occurs under

normal circumstances, in order to define the causes underlying T lymphocyte deficiency diseases, and to develop treatments for these deficiencies.

"Howard's work is groundbreaking and has significantly increased our knowledge in ways that move us toward both understanding essential life processes and finding avenues for correcting health-destroying deficiencies," said Scripps Research President Richard A. Lerner, M.D., at the time of the public announcement. "Scripps Florida is fortunate to be able to give Howard the opportunity and tools to push his research even further ahead."

"The vision and resources provided by Scripps Research and the state of Florida have created an environment that is virtually unique, incorporating state-of-the art technology with a breadth of research interests", said Petrie. "I'm pleased and eager to be able to play a role in this venture."

Dr. Petrie, a native of Pennsylvania, received both his Bachelor of Science (1978) and Master of Science (1981) degrees, with majors in microbiology, from Pennsylvania State University, in University Park, Pennsylvania. He earned his Ph.D. in Medical Sciences from the University of Nebraska Medical Center in Omaha in 1988.

He then completed a four-year postdoctoral fellowship in the Lymphocyte Differentiation Unit of the Walter and Eliza Hall Institute of Medical Research in Melbourne, Australia, followed by a two-year postdoctoral fellowship in the Section of Immunobiology at Yale University School of Medicine in New Haven, Connecticut.

From 1993 to 2004, he was an assistant member, then associate member, of the Sloan-Kettering Institute in New York. During the past year, he was a professor in the Departments of Microbiology/Immunology and Medicine (Hematology and Oncology) at the University of Miami School of Medicine in Miami, Florida.

Dr. Petrie has published more than 45 papers in leading research journals, as well as contributing to a number of books. He has presented his work at major scientific conferences around the world. He is currently associate editor of *Clinical and Developmental Immunology* and has served in various editorial positions at *The Journal of Immunology* and *Seminars in Immunology.*

GOVERNANCE

In September of 2004, The Scripps Research Institute Board of Trustees elected three new members, two recommended by the Scripps Florida Funding Corporation, and the third a prominent Florida business leader.

The SFFC recommended and the Scripps Research board unanimously elected Phillip Frost, M.D., of Miami, a clinical professor of dermatology at the University of Miami School of Medicine, and J. Michael Cook, of Greenwich, Connecticut, the retired chairman and chief executive officer of Deloitte and Touche, LLP, one of the nation's leading professional services firms.

The trustees also unanimously elected Lawrence F. De George, V.M.D., of Jupiter, the chairman and CEO of LPL Investment Group, Inc., and LPL Group, Inc., a private venture capital firm with investments in telecommunications, biotechnology, and financial services throughout Europe, South America, and the United States.

"The Scripps Research Institute is fortunate to have three individuals who are leaders in their respective fields available to advise and guide the organization, particularly at this time of exciting expansion in Florida," said Scripps Research President Richard A. Lerner, M.D., at the time of their election.

Phillip Frost, M.D.

A native of Philadelphia, Dr. Frost received his B.A. degree from the University of Pennsylvania in 1957 and his medical degree from the Albert Einstein College of Medicine in New York in 1961. He did his

internship at New York's Montefiore Hospital and his residency in dermatology at the Hospital of the University of Pennsylvania. From 1963 to 1965, he served at a lieutenant commander in the U.S. Public Health Service, stationed at the National Cancer Institute, Dermatology Branch, in Bethesda, Maryland, then completed a one-year senior residency at Jackson Memorial Hospital in Miami, Florida.

Dr. Frost joined the faculty of the University of Miami School of Medicine as assistant professor of dermatology in 1966. In 1972, he was named chair of the Department of Dermatology at Mount Sinai Medical Center of Greater Miami in Miami Beach, a position he held for 18 years. In 1991, he took his current position as clinical professor of dermatology at the University of Miami School of Medicine.

He has served in leadership positions with many corporations and organizations, and is presently a director of Northrop Grumman Corporation, a governor of the American Stock Exchange, chairman of the board and CEO of IVAX Corporation, chairman of IVAX Diagnostics, and is chairman of the board of trustees at the University of Miami.

J. Michael Cook

Mr. Cook, retired chairman and CEO of Deloitte & Touche LLP, also served as chair of the Deloitte & Touche Foundation and as a member of the board of Deloitte & Touche Tohmatsu. He directed the global merger of Deloitte Haskins & Sells and Touche Ross in 1989.

He graduated with honors in 1964 from the University of Florida, majoring in business administration, and was named a Distinguished Alumnus of the university in 1986. He has received numerous awards for his commitment to the advancement and retention of women in business, including the CEO Recognition Award from Women in Technology International and *Working Mother* magazine's Family Champion of the Year Award. He was the only male member of the President's Commission on the Celebration of Women in American History. He is Chairman Emeritus of the Board of Catalyst, the nation's leading organization for the advancement of women in business.

Mr. Cook has been a leader in his profession, serving as chairman of the American Institute of Certified Public Accounts in its centennial year and a member of its Auditing Standards Board. He is the immediate past chairman and president of the Board of Trustees of the Financial Accounting Foundation, the overseer of the Financial Accounting and Governmental Accounting Standards Boards. He was the 62nd inductee into the "Accounting Hall of Fame" in 1999 and the recipient of the Public Oversight Board's McCloy Award in 2001. He is chairman of the GAO Accountability Advisory Panel, providing guidance to the Comptroller General of the United States and other GAO executives, and has recently been appointed to the Advisory Council of the Public Company Accounting Oversight Board.

He is a member of the boards of The Dow Chemical Company, Comcast Corporation, Northrop Grumman Corporation, and the Fidelity Group of Mutual Funds, among others. His civic leadership includes active service with the United Way of America, Central Park Conservancy and the New York City Ballet. He is a former member of the Board of Overseers of the Columbia Business School and a member of the Business Advisory Board of the University of Florida.

Lawrence F. De George, V.M.D.

Dr. De George received his veterinary medicine degree in 1980 from the University of Pennsylvania, where he also did his residency and served as an instructor in medicine. He began his business career in 1984 as executive vice president with LPL Group, Inc., in Wallingford, Connecticut, specializing in mergers, acquisitions and leveraged buyouts. From 1986 to 1991, he was first chief financial officer, then president of Amphenol Corporation, Inc., also of Wallingford, a Fortune 500 company that is a leading multinational manufacturer of telecommunications interconnect products for commercial and military applications and the cable television industry. In 1991, he became chairman and CEO of LPL Investment Group, Inc., and LPL Group, Inc., in West Palm Beach.

Dr. De George is also founder and chairman of CompleTel LLC, a competitive local exchange carrier (CLEC) in Amsterdam and Paris; former director of United Global Communications, Inc., a multinational

broadband communications services provider; founder and director of iPlan Networks, a CLEC providing voice, data and internet infrastructure services in Argentina; founder and former director of GigaRed, S.A., a converged broadband cable television operator in Argentina; founder and chairman of Cervalis, LLC, a high end provider of manager server hosting, disaster recovery and storage for business outsourcing IT functions and internet-based companies requiring N+1 security.

He is also founder and director of Advanced Display Technologies, Inc., based in Denver, a development stage company developing and manufacturing full color display screens for stadium, advertising and highway applications.

J. Gary Burkhead

Then in June, 2005, retired Fidelity Investments executive J. Gary Burkhead of Palm Beach, was elected to the Board of Trustees.

"Gary brings a lifetime of invaluable professional experience to our Board," said Scripps Research President Richard A. Lerner, M.D., at that time. "His leadership, wise counsel, and expertise in financial management will serve Scripps Research well in the coming years."

Prior to his retirement in 2000, Burkhead was Vice Chairman and a member of the Board of Directors of the parent company of Fidelity Investments, FMR Corporation. From October 1997 to January 2000, he was also President of Fidelity Personal Investments and Brokerage Group, then comprised of Fidelity's retail mutual fund and brokerage operations, related systems and processing groups, and institutional brokerage.

Burkhead also served as President of Fidelity Institutional Group, Fidelity Management and Research Company (Fidelity's investment management organization), and Fidelity Investments Institutional Services Company, Inc. He joined Fidelity Investments, the largest mutual fund company in the United States, in 1983.

Prior to that, he was Executive Vice President of Equitable Life Assurance Society of the United States and had been Director of Research and member of the Board of Smith Barney.

Burkhead received a presidential appointment to serve as one of three U.S. members of the Business Advisory Council to the Asia Pacific Economic Cooperation nations. In addition, he has been a member of the Board of Directors of the Financial Analysts Federation and the Board of Trustees of the Institute of Chartered Financial Analysts.

He has served on the Board of Directors of the New York Stock Exchange and the Securities Industry Association. He is currently a trustee of Dana-Farber Cancer Institute.

Burkhead received a Bachelor's Degree from Columbia University and an M.B.A. from Harvard University Graduate School of Business.

COLLABORATIONS

The Scripps Florida Collaborative Seminars

Scripps Florida announced in February, 2005, a series of high-level biomedical science seminars—*The Scripps Florida Collaborative Seminars*—featuring a prominent Florida-based speaker from the academic, biotechnology, or pharmaceutical communities at each session.

"These seminars will serve as one of the major foundations for creating knowledge- and technology-sharing opportunities, team building, and in-laboratory and other collaborations among biomedical researchers at Scripps Florida and other Florida research institutions, universities and companies," said Scripps Research President Richard A. Lerner, M.D., in announcing the seminar series.

The Scripps Florida Collaborative Seminars presentations are focusing on topics within the broad fields of biomedical science, advanced technologies applied to biomedical research, and drug discovery. The sessions are open to interested professionals within the Scripps Florida and Florida scientific communities. They began in March on the Florida Atlantic University Jupiter campus where Scripps Florida is currently operating.

"Collaborations among researchers are the lifeblood of contemporary biomedical science" according to Lerner. "Science today is so complex, detailed, interdisciplinary, and expensive to accomplish that rarely can one researcher work effectively alone."

At The Scripps Research Institute (and in the scientific research community in general), these collaborations are a "bottom up" process. When an individual biomedical researcher begins to define a project that he/she deems necessary and important to advance knowledge, the researcher will look to a network of colleagues in various relevant fields, developed over years of professional interactions such those to be provided by *The Scripps Florida Collaborative Seminars*. A team whose expertise and experience match the work to be undertaken is assembled that then seeks funds to support the proposed project.

To ensure essential academic and scientific freedom at Scripps Research, the individual researcher generally initiates these collaborations, not the Institute. Scripps Research does not dictate or pressure the scientist to pursue any particular project. Rather, Scripps Research encourages the scientist to push against the boundaries of what is known in his/her field in a quest to discover something new and important to the benefit of human health. For this reason, *The Scripps Florida Collaborative Seminars* are an essential step in fostering interaction among individual scientist at Scripps Florida and Florida research-focused institutions.

Scripps Research scientists are involved in collaborations with researchers at other institutions worldwide, working as team leaders and members. With the recent development of its temporary campus in Palm Beach County, Florida, the institute has already initiated collaborative arrangements with the University of Florida for the shared use of magnetic resonance imaging technology and with Florida State University for mass spectrometry technology. *The Scripps Florida Collaborative Seminars* will provide another opportunity for science information-sharing, team building, and collaborations in proposal preparation, technology usage, laboratory work, data analysis, and many other areas.

"As the Scripps Florida research staff gradually grows, its collaborations with Florida scientists will grow," Lerner said. "*The Scripps Florida Collaborative Seminars* are one necessary first step in that process."

FUNDING

West Palm Beach Philanthropist Alexander W. Dreyfoos' $1 Million Gift

Alexander W. Dreyfoos of West Palm Beach, Florida, announced on November 8, 2004, that he and his wife, Renate, were contributing $1 million to The Scripps Research Institute. Dreyfoos, elected to The Scripps Research Board of Trustees in February, 2003, made the announcement at the board's first meeting in Palm Beach County.

"The Dreyfoos gift will help to further biomedical research and contribute to human health," said Scripps Research President Richard A. Lerner, M.D., at the time of the announcement. "As they have done repeatedly in the past, Alex and Renate have chosen to make a major contribution that serves us all. We are truly thankful for their generosity and leadership."

Alexander Dreyfoos owns and directs The Dreyfoos Group, a private capital management firm that grew out of his previous ventures. These include the Photo Electronics Corporation, a company he formed in 1963 to manufacture electronic equipment for the photographic industry, and WPEC-TV-12, the ABC, then CBS affiliate in West Palm Beach, with which he was involved from 1973 to 1996.

"We are proud and excited to support The Scripps Research Institute, particularly as it gets off the ground here in Palm Beach County," Dreyfoos said. "The scientists and their research can make a significant difference, both in health care and in the quality of our lives."

Dreyfoos holds a B.S. degree from the Massachusetts Institute of Technology (MIT) and an M.B.A. from Harvard Business School. He is an inventor, holding 10 U.S. and numerous foreign patents in the fields of electronics and photography.

His Photo Electronics Corporation designed and manufactured the digital image processing Professional Video Analyzing Computer used by color laboratories for making high quality photographs. The company also invented the LaserColor printer, which produced extremely high quality, electronically generated color prints from color slides. In 1971, the company received an "Oscar" from the Academy of Motion Picture Arts and Sciences for its development of a motion picture video analyzer. An earlier version of the video analyzer is now in the permanent collection of the Smithsonian Institution in Washington, D.C.

Dreyfoos was instrumental in forming and served as the first chairman of the Palm Beach County Council of the Arts. He spearheaded efforts to build a world-class performing arts center in Palm Beach County and continues to serve as founding chairman of the $100 million Kravis Center, which opened in 1992.

He is a lifetime trustee of the MIT Corporation, serving on several of its visiting committees. The Dreyfoos Building at MIT, designed by Frank Gehry, was recently dedicated.

In 1997, Dreyfoos made the largest private contribution to a public school in Florida when he pledged $1 million to support Palm Beach County's public arts magnet high school, subsequently named for him.

Dreyfoos was recently named a Fellow of the American Academy of Arts and Sciences, a prestigious learned society composed of the world's leading scientists, scholars, artists, business people, and public leaders. He serves on numbers public and nonprofit boards and has received numerous distinctions and honors for community involvement, including an honorary Doctor of Science degree.

Renate Dreyfoos, a native of Germany who came to the United States as a young child, lived in Pittsburgh before settling in Florida. She joined Photo Electronics in 1969, where she became vice president of human resources. She left the firm in 1992 to follow a career in banking. She and Alexander were married in 2000.

Kenan Charitable Trust Grant for Education Outreach Programs

The William R. Kenan, Jr. Charitable Trust announced in May 2005 that it was providing $200,000 to The Scripps Research Institute to support education outreach programs at Scripps Florida. The announcement was made by Dr. Richard M. Krasno, executive director of the Trust and president of the William R. Kenan, Jr. Fund based in Chapel Hill, North Carolina.

"Although brand new, Scripps Florida brings more than 40 years of world-class research and reputation from its California campus to Florida, along with a world-class team of scientists who have come here from some of the best academic and commercial organizations anywhere," said Krasno. "The people of the state and Palm Beach County have jump-started Scripps Florida with a large, long-term public commitment, both financial and political. It is appropriate that a private institution like ours that is interested in the state and in improved education also make an early commitment of financial support and advice."

The Trust supports university, college, and school programs that foster sustained, substantive training in the arts, humanities, and sciences.

The $200,000, two-year grant will support a variety of outreach activities for science teachers and students in Palm Beach County, including this summer's internship program at Scripps Florida's temporary facilities in Jupiter.

"This generous gift means that we can begin the summer science internship program in our labs on the Florida Atlantic University MacArthur campus this year," said Harry W. Orf, Ph.D., Scripps Florida's vice president for scientific operations who also oversees the middle and high school programs there. "Last year we had local support from Bank of America to send two Palm Beach County science teachers to California, where they joined 30 San Diego teacher and student interns. Now we can grow a similar program in Florida even before our permanent campus is completed, along with a number of other projects we've had in mind for some time."

Those projects include a Science Saturday program and a mobile science center to take new technologies used in Scripps Florida labs to schools sites and elsewhere. An education committee organized by Orf is responsible for planning, oversight, and evaluation of the projects.

Grant from Factor Foundation of Florida

Assistant Professor Andrew Gale, Ph.D., an investigator in the Department of Molecular and Experimental Medicine at The Scripps Research Institute in La Jolla, received a grant of $98,769 from the Factor Foundation of America in May 2005 to study hemophilia A, a bleeding disease that strikes some 17,000 Americans.

The Factor Foundation, based in Boca Raton, is a national nonprofit organization dedicated to facilitating grants for research, education, and clinical support for hemophilia and other bleeding disorders.

In addition to its grant support, the foundation planned to host its first public fundraising event, "Dave's Memory Revs On," at the Moroso Motorsports Park in Palm Beach Gardens, Florida, on June 11. All funds from the show of vintage Ford Mustang cars, commemorating the foundation's founder, Dave Madeiros, were to benefit Scripps Florida, the Institute's new operation in Palm Beach County. Unfortunately, the event was cancelled due to inclement weather. A cocktail reception to benefit Scripps Florida was held in its place.

"The Scripps Research Institute shares the Factor Foundation of America's concern for the thousands of Americans who suffer from debilitating, sometimes fatal, bleeding disorders," said Institute President Richard A. Lerner, M.D. "We deeply appreciate the foundation's generous support of our work on hemophilia A, both through the research grant and what is sure to be a festive day for families in Palm Beach County, our new neighbors."

Gale and his colleagues have already made an important discovery that they hope will lead to an improved therapy for hemophilia A. They engineered a stable form of the protein Factor VIII, which is a coagulatory blood protein that hemophiliacs have little or no ability to produce themselves.

Hemophilia A is often treated with infusions of pre-activated Factor VIII, and several forms of the treatment are already on the market. These infusions provide patients with the normal inactive form of the protein, and when that person gets cut, other proteins in the body can then process the inactive Factor VIII into its active form, called "Factor VIIIa".

However, once activated, Factor VIIIa is highly unstable and tends to fall apart in the bloodstream. This instability is an important feature of normal coagulation because it prevents the clotting process from getting out of control. In hemophiliacs being treated with Factor VIIIa, however, its instability is a problem because, as its pieces dissociate, the protein infusion loses its potency.

Gale and his colleagues made a more stable form of Factor VIIIa by engineering the protein so that its individual pieces are linked together with what are known as "disulfide bonds." These prevent the subunits from falling apart—sort of like handcuffing them together on the molecular level.

"Our Factor VIIIa is very stable," said Gale, adding that as a therapy, this increased stability could improve the effectiveness of Factor VIII infusions by reducing the number and amount of such infusions a hemophiliac would need.

But Gale and his colleagues' initial discovery a few years ago left open the question of the effect of the new stabilized form of Factor VIIIa on the body. The scientists have looked at its stability in the test tube, but further studies are needed to determine whether the body could handle the new form of the protein.

The Factor Foundation grant will pay for some of the preliminary pre-clinical experiments aimed at testing how effective the new form of Factor VIIIa is in laboratory rodents. If data from these experiments look promising, then the next step would be to consider human trials.

"This is crucial support that is arriving at the best possible moment in this research," said Gale. "We want to see how well my engineered, stabilized Factor VIII works, and the Factor Foundation is making that possible."

National Institutes of Health $10.4 Million Grant

A group of researchers at both the La Jolla, California, and Palm Beach County, Florida, campuses of The Scripps Research Institute was awarded a $10.4 million dollar grant from the National Institutes of Health (NIH) in June 2005 to establish The Scripps Research Institute Molecular Screening Center. This is a pilot program to discover small molecule tools for translating basic biomedical discoveries more quickly into medically relevant applications.

The screening center at The Scripps Research Institute and Scripps Florida together with nine screening centers from the public and private sectors, will comprise the Molecular Libraries Screening Centers Network (MLSCN), a part of the NIH's strategic funding plan, the Roadmap Initiative. The funds will be administered jointly by the National Institute of Mental Health (NIMH) and the National Human Genome Research Institute (NHGRI) on behalf of NIH, and the work, which is scheduled to last three years, begins this month.

These centers will conduct high throughput screens against various biological targets to uncover "proof-of-concept" molecules useful in studying human health and in developing new treatments for human diseases.

"This sort of work has traditionally been done by pharmaceutical companies, never before in the public/non-profit sector," said Scripps Research President Richard A. Lerner, M.D., at the time of the announcement. "With this grant, the NIH has recognized the unique capabilities of our established researchers in La Jolla with our newest investigators and equipment in Palm Beach County."

"Our goal is to provide tools for the broad scientific community so that we can accelerate the pace of the application of chemical biology to the understanding of physiology and pathophysiology," said Scripps Research Professor Hugh Rosen, M.D., Ph.D., who is the principal investigator on the grant.

"Congratulations to The Scripps Research Institute, Scripps Florida, Dr. Richard Lerner, Dr. Hugh Rosen, and the entire Scripps team for receiving this most significant grant from the National Institutes of Health," said Florida Governor Jeb Bush, who was instrumental in the creation of Scripps Florida. "Today's announcement is a testament to the dynamic synergy that exists between The Scripps Research Institute/Scripps Florida and our national objectives to cure disease and improve human health. I am proud of Scripps Florida, its scientists, and the Florida support organizations that will participate in the implementation work associated with this grant. This kind of cross-pollination between The Scripps Research Institute and its East Coast campus, Scripps Florida, is an example of the synergies we envisioned when we first approached Scripps, and is only a precursor of what lies ahead."

This grant is the first to fund a variety of activities across the two campuses of Scripps Research. Assay development will take place in La Jolla, and the high-throughput screening will be conducted by scientists at Scripps Florida's temporary facilities in Jupiter, including Josephine Harada, Ph.D.

Nick Tsinoremas, Ph.D., senior director of Bioinformatics at Scripps Florida, will oversee the establishment of a data management infrastructure for managing and analyzing the flood of data that comes from those screens. He will also develop the interfaces for users and for scientific instruments so

that data can be automatically analyzed and uploaded once acquired. The data will have to be standardized and pass quality control to ensure it is accurate and relevant.

After the data is acquired, scientists in La Jolla and Palm Beach County will perform high-level data analysis. If a compound interacts with a particular molecular target, they will investigate the interactions of the compound and whether these interactions could be adjusted to optimize the compound's drug-like characteristics—its potency, solubility, stability, the degree to which it is absorbed by the body, and whether or not it is degraded into dangerous metabolites in the body.

These are all issues that fall generally within the purview of Pat Griffin, Ph.D., Professor in the Department of Drug Discovery and head of Drug Metabolism and Pharmacokinetics at Scripps Florida. By looking at which compounds are the most promising, Griffin and his colleagues will be able to take them a step further by modifying the compounds to optimize some of their chemical features.

Key to this effort will be a chemistry group in La Jolla led by Assistant Professor Sheng Ding, Ph.D., who is a graduate of Scripps Research's Kellogg School of Science and Technology. Ding and the other chemists in La Jolla will take the information generated by Griffin and others and perform medicinal chemistry on individual compounds—making improved versions, including some that may serve as high-quality leads for drug design. Ding and his group will also be helping to develop some of the screens that the Molecular Libraries Screening Center Network will utilize as well as some of the chemical probes that will be used in these screens.

Finally, all the chemical structures and biological data generated by the network screening centers will be deposited into a government-owned database called PubChem, which is a component of the NIH Molecular Libraries and Imaging Roadmap Initiative and maintained by the National Library of Medicine.

NeoRx Partnership

On August 4, 2005, NeoRx Corporation (NASDAQ: NERX), a cancer therapeutics development company, and The Scripps Research Institute, a non-profit biomedical research organization, announced the first collaboration at Scripps Florida, focusing on discovering novel, small-molecule, multi-targeted, protein kinase inhibitors as therapeutic agents, including cancer treatments.

"The choice of NeoRx as Scripps Florida's first partner in biotech research is truly exciting, and is only the beginning of the many scientific collaborations sure to come," said Governor Jeb Bush at the time of the announcement. "This partnership with Scripps Florida will surely strengthen our state's position as a world leader in curing disease and improving the human condition."

NeoRx is the first biotechnology company to enter into a research alliance with Scripps Florida, the newly established division of Scripps Research in Palm Beach County. NeoRx will provide $2.5 million over 26 months, approximately $140,000 of which will be paid in 2005, to support the research and will have the option to negotiate a worldwide exclusive license to any compounds developed through the collaboration.

"We are excited to have selected NeoRx as our first biotech partner at Scripps Florida and to move forward with this collaboration to identify potential cancer treatments," said Richard A. Lerner, M.D., Scripps Research President, at the announcement. "This is a significant opportunity, the first of many to come at Scripps Florida, for collaboration between leading scientists to do world-class science and discovery, ultimately leading to improvements in human health."

"We are pleased to have entered into a research agreement with this premier research institution and are hopeful that our collaboration will lead to novel and unprecedented cancer products for our pipeline," said Jerry McMahon, Ph.D., chairman and chief executive officer of NeoRx. "While we are currently focusing our resources on the clinical development of picoplatin, a next-generation intravenous platinum compound, we are committed to broadening our cancer portfolio to include agents with various mechanisms of action, including targeted cancer therapies such as protein kinase inhibitors. It is becoming clear that the use of both platinum-based chemotherapeutics and kinase inhibitors either in combination or sequentially may provide important clinical benefit to patients."

"Scripps Florida's selection of NeoRx as its first biotech partner reflects NeoRx's experience and focus in oncology," said Thomas J. Pritzker, chairman and co-founder of Bay City Capital and chairman and CEO of The Pritzker Organization. "As a NeoRx investor, I am excited about the promise of this research partnership."

The research collaboration will be led by Chris Liang, Ph.D., director of medicinal chemistry at Scripps Florida. Dr. Liang's research focuses on the discovery of novel pharmaceuticals for the treatment of cancer, arthritis and asthma. He previously served as director of chemistry at SUGEN, Inc., a biopharmaceutical company focused on the discovery and development of novel, targeted small-molecule drugs. SUGEN, where Dr. McMahon previously served as president, was acquired by Pharmacia in 1999, which subsequently was acquired by Pfizer in 2003. While at SUGEN, Drs. Liang and McMahon were involved in the discovery and development of SUTENT (SU11248), a novel, oral multi-targeted tyrosine kinase inhibitor, currently in registrational trials with Pfizer for the treatment of advanced cancers. Dr. Liang also developed a novel computational model for predicting kinase selectivity of inhibitors by analyzing the entire human kinase genome, or the kinome. In addition, he was a key participant in the discovery of several additional drug candidates currently in various stages of development by Pfizer.

OUTREACH AND EDUCATION

Summer Internships for Students and Teachers in Palm Beach County

The Scripps Research Institute announced in February, 2005, that it had begun accepting applications from secondary school science teachers and high school students for paid summer internships at its Scripps Florida facility in Jupiter.

"These internships mark the first formal manifestation of our educational outreach initiatives for Florida," said Harry Orf, Ph.D., who is vice president of scientific operations at Scripps Florida. Orf notes that as the research facility grows, it plans to extend its outreach to not only increase the number of internships for students and teachers, but also to broaden outreach venues. "We are currently looking to bring basic 'introduction to science' lessons to middle school students and are discussing several options for a biotech educational initiative for high school students with the County's science coordinator as well as educational faculty from neighboring universities," Orf reports.

"We hope this is the beginning of a long relationship," said Fred Barch, science coordinator for the Palm Beach County School District. "The Scripps scientists have been extremely helpful in explaining the Scripps mission to our science teachers. The summer programs have generated enthusiasm and interest among our teachers and students who are excited about the possibility of working with some of the best scientists in the world. This interest in biotech will enhance our science program in Palm Beach County."

Both Florida programs provide a hands-on laboratory experience, with teachers and students conducting research in a laboratory under the supervision of a Scripps Florida scientist. Interns are exposed to current laboratory techniques and procedures, and provided information on a variety of contemporary issues in basic biomedical research. The programs emphasize the scientific process, research planning, bench experience, experimental design, data analysis and interaction with laboratory personnel. As an adjunct to their day-to-day responsibilities, participants attend specially-designed programs and field trips.

The Summer Research Internship Program for Teachers gives high school educators the opportunity to create ties and linkages to working scientists who can assist them in curriculum development. Teachers are expected to use the laboratory experience as a springboard to create opportunities in discovery-based learning for their students, effect change in their classrooms and serve as a resource for other educators. They must demonstrate their willingness to pursue year-round follow-up activities based on the summer experience.

The Scripps Florida High School Summer Internship Program aims to inspire students in their current and future educational pursuits by exposing them to leading-edge research. In addition, it is committed to

motivating students from groups traditionally underrepresented in the sciences to pursue undergraduate and graduate programs in the biological and chemical disciplines.

Then in May, 2005, Scripps Florida announced that it has selected three secondary school science teachers and four high school students for the paid summer internships. The teachers and students, all from schools in the Palm Beach County School District, were selected on a competitive basis to work in partnership with world-class scientists and their staffs at the Scripps facility on the Florida Atlantic University MacArthur campus in Jupiter. The interns began seven weeks of full-time work in early June.

Governor Jeb Bush, whose vision prompted Scripps Research to open facilities in Florida, commented, "Today's outstanding announcement is one of many that will come from the unprecedented partnership that has been forged between the Sunshine State and Scripps Florida. This is an exciting internship program, which will offer a once-in-a-lifetime learning experience for the selected interns. I thank the Kenan Charitable Trust and The Scripps Research Institute for bringing this program to fruition, and look forward to similar educational outreach initiatives for many years to come."

The teacher participants were:

- Angela Bischoff of Lake Worth, who teaches biology, environmental science, and chemistry at Park Vista Community High School, Lake Worth;
- Jairo M. Garcia of Delray Beach, who teaches science, molecular biology, and environmental science at Spanish River High School, Boca Raton; and
- Brian L. Nelson of Green Acres, who teaches chemistry and integrated science at Wellington Community High School, Wellington.

The student interns, all juniors, were:

- Dionda T. Burney, 16, of West Palm Beach, a junior at Suncoast High School, Riviera Beach;
- Austin L. Hurd, 17, of Boynton Beach, a junior at Park Vista Community High School, Lake Worth;
- Anand A. Parekh, 16, of Boynton Beach, a junior at Atlantic Community High School, Delray Beach (Anand's science teacher, Scott Morone, participated in the Scripps Research internship program on the La Jolla campus in 2004); and
- Stephanie Y. Wu of Boynton Beach, a junior at Spanish River Community High School, Boca Raton.

The internship programs, along with other Scripps Florida education outreach activities, are being funded this year and next by the William R. Kenan, Jr. Charitable Trust through a $200,000 two-year grant.

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As 2005 draws to a close, Scripps Florida anticipates a number of milestones to come:

- The first scientific papers by Scripps Florida researchers to be published in major scientific journals.

- Groundbreaking for the Scripps Florida permanent campus on the Mecca Farms site, with the announcement of a major gift.

- An international scientific conference, co-hosted by The Scripps Research Institute and Oxford University, in Palm Beach County, with presentations and participation by Scripps Florida faculty.

- The continuing appointments of internationally recognized scientists to the Scripps Florida faculty.

- Scientist-to-scientist collaborations between Scripps Florida scientists and their colleagues at other Florida-based institutions.

Once again, The Scripps Research Institute and Scripps Florida thank the people of Palm Beach County and Florida, the Governor, the Legislature, the Palm Beach County Commission, the Scripps Florida Funding Corporation, and the many individuals who have supported our efforts to date and with whom we look forward to working as partners in the years ahead.

SCRIPPS FLORIDA ANNUAL REPORT
For Year Ending June 30, 2005

Section 9.3 **Annual Report. Scripps (The Scripps Research Institute) shall prepare the annual Report for Scripps Florida each year and deliver such annual Report to Funding by August 31st of each year. The annual report shall include, but not be limited to, the following information:**

Section 9.3(a) **An accounting of the expenditures of Grant Funds for the twelve months ended June 30th of each year (the "Report Year" [as amended]) and financial commitments made by Scripps during the Report Year.**

SCRIPPS FLORIDA
Report of SFFC Grant Fund Cash Disbursements from October 1, 2004 to June 30, 2005

Category		Amount
Salaries & Benefits	$	3,530,937
Supplies		3,402,473
Scientific Equipment		12,392,524
External Affairs & Other Program Support		474,763
Project Commencement, Facilities, Administration and Other Capital Expenditures		6,637,618
	$	26,438,315

This schedule reflects cash expenditures charged to the grant from the State of Florida from October 1, 2004 through June 30, 2005. The expense categories set forth above reflect those used by Scripps to report grant activity to grantors. This schedule excludes:

- Unpaid commitments;
- Unspent grant funds of $44,282,963 from the Year Two grant (of which $27,654,500 has been received, including interest income);
- Funds provided by other sources; and
- Expenditures charged against other funding sources.

Also included as Appendix 1 are unaudited combined balance sheets, combined statements of activities and cash flows for Scripps and Scripps Florida.

Section 9.3(b) **Data regarding the activities and performance of Scripps Florida during such Report Year and detailing the progress of Scripps in meeting its Business Plan, including but not limited to:**

Section 9.3(b)i **Information on the number and salary level of jobs created by Scripps within Scripps Florida, including the number and salary level of jobs created for residents of Florida;**

Position	7/01/04 - 6/30/05	Avg. Annualized Salary
Professor	8	$165,483
Assoc. Prof.	0	
Asst. Prof.	5	$92,294
Research Faculty	9	$117,134
Staff Scientist	7	$75,810
Res. Assoc/ Post. Docs.*	15	$39,957
Administration**	43	$54,779
Total	87	

* Total does not include 5 Post. Docs/Res. Assoc. hired but paid from non-SFFC funding sources.
** 30 of the 44 individuals listed under the Administration category provide direct science support (e.g., laboratory technicians).

Of the 87 new hires in the past year, 51 were residents of Florida and 33 were residents of Palm Beach County. As of June 30, 2005, Scripps Florida employed 107 persons. Between June 30, 2005 and the date of this report (August 31, 2005), Scripps Florida hired an additional 24 persons, 9 of whom were residents of Florida and 7 of who were residents of Palm Beach County. Of those 24, 1 was an Assistant Professor, 2 were Research Faculty, 3 were Scientific Staff, 6 were Post. Docs/Research Associates, and 11 were Administration (9 of whom provide direct scientific support). As of the date of this report, Scripps Florida employs 131 persons.

Section 9.3(b)ii **A description of the status of the performance expectations set forth in Section 9.5 of this Agreement and the disbursement conditions set forth in Schedule 4.4(c) of this Agreement;**

See responses to Schedule 4.4(c) conditions below.

Section 9.3(b)iii **Information on positions and funds to be required to be committed for equipment for such positions by means of the next annual disbursement of Grant Funds;**

Approximately $12,400,000 of equipment was purchased from October 1, 2004 through June 30, 2005 (See Appendix 2). The budget for Scripps Florida for the year ending September 30, 2006, will be submitted to SFFC after Scripps Board approval. This budget sets forth all anticipated revenue and expenses for Scripps Florida for the next fiscal year.

Section 9.3(b)iv

Commencing with the annual Report for 2006 Report Year and ending with the Report Year after which Scripps has moved the Scripps Florida operations to its permanent facility and such facility is fully operational, a description of the status of Scripps' relocation to its second planned temporary facility and the progress of construction activities for its permanent facility, as described in the Business Plan, including a projected date for and status of Scripps' occupancy of its permanent facility;

Temporary Facilities:

The initial temporary facilities for the Scripps Florida space were identified as existing space on the Florida Atlantic University Boca Raton campus. Chemistry, biology and vivarium spaces were made available to the earliest scientific personnel arriving in Florida. The Laboratories were used in existing condition and no improvements were required. These Laboratories were used by the new scientists until February 2005 when they were relocated to the new facilities at the FAU Jupiter Campus. In addition, space was leased in the Regent Financial Building at 1555 Palm Beach Lakes Blvd., W. Palm Beach, for the administrative requirements of Scripps Florida. This space continues to be leased for administrative requirements, although many of the employees have now been relocated to the FAU Jupiter Campus.

The 41,500 sf, temporary laboratory facilities requirements of Scripps Florida at the FAU Jupiter Campus were completed and granted the occupancy certification on January 15, 2005. Relocation from the Boca Raton space occurred in February and a dedication ceremony was held on March 11, 2005. In addition to the laboratory building, six modular buildings totaling 4,320 sf were leased for administrative and non-wet lab staff. The buildings are filled with the scientist and staff and an additional temporary facility is currently in design. This second temporary facility will be approximately 33,000 square feet and will be completed by August 2006.

Permanent Facilities:

The design for the Permanent Facilities continued over the past year. Based on the County Commission action to postpone the approval of the PBC Biotechnology Park, we were unable to submit plans for the project per our schedule and a revised submission date was October 24, 2004. The foundation plans were submitted for permit on November 1, 2004. The Design Development stage was completed on November 13, 2004. On January 24, 2005, Scripps completed the 50% Construction Document phase, and finally on April 1, 2005 the Construction Documents were complete.

The DRO hearing was held on March 23, 2005, and on April 25, 2005, we received the DRO Result Letter for the Final Site Plan pending approval of the DRI Amendments and approval of the Comprehensive Plan Amendment. Though the County had not authorized "vertical construction", it did accept the submission of the plans for building permit on April 29, 2005. It was agreed that the drawings which were being updated to match the DRO approved documents would not be submitted until mid-May.

After the Foundation Permit was applied for in November 2004, the Construction Manager went out for bids. However, due to the potential delays being extensively reported by the newspapers there was not a robust bid environment. The County notified Scripps that due to the hurricanes the site would not be completed as scheduled on January 1, 2005, and the date for delivery of the site was postponed until May 27, 2005. The Foundation Permit was issued on July 18, 2005, and the issuance of the Building Permit for the remainder of the project is anticipated in late August or early September 2005.

On May 24, 2005, the Palm Beach County Board of Commissioners voted unanimously to allow the vertical construction to be allowed to proceed. This vote put into motion the work necessary to prepare to bid the project. The project team had been only working on the completion of the design and permitting up until this date. The first steps necessary were to remobilize the project team. An all-hands meeting was held on June 1 and 2 to set out the plans for getting the project ready for bidding. Some key members of the project team were no longer available for project assignment, due to the delay in starting construction as originally planned. In particular, a number of the senior construction management field employees of the contractor have been assigned to other projects, or moved to other companies. It took almost two months to identify the new key team members and get them on the project.

During the June 1-2 "team remobilization" meeting an aggressive schedule was developed to try to start the construction effort as rapidly as possible to make up time that has been lost due to the overall project delay. The Foundation Permit was identified as a critical element to secure, thus allowing field operations to commence. However, starting foundations too early would cause a disconnect in overall superstructure timing, and would result in discontinuous work flow. The determination was made that starting construction in late September 2005 would optimize field operations and work flow.

Bidding for the first of five bid packages has commenced. Overall bidding has been structured into five bid package groups, and the documents were made available to invited bidders on July 8 for the first package grouping, which is the Concrete Shell. Pre-bid conferences were scheduled to occur on July 26, with the remaining four bid packages pre-bid conferences scheduled for August 9 and August 16. All bids will be received by August 30, 2005 and a GMP delivered to Scripps on September 16, 2005.

A groundbreaking ceremony is scheduled for September 23, 2005 and commencement of construction is anticipated to be September 26, 2005.

Scripps has participated in close coordination with the Scripps Florida Project Manager, Bevin Beaudet and more recently Shannon Larocque and their team members. Scripps Team members meet biweekly with the County Team members to coordinate the overall activities of the project effort. As the actual site development has started, this effort is more crucial to assure that the expected deliveries of improvements are made in a timely fashion to allow for the construction of the Scripps Permanent Facilities. Special attention is being made to follow the utility systems such as power, gas, water and sewer to the Scripps site for the initial start of the building systems.

Section 9.3(b)v **And commencing with the Annual Report for the Report Year during which Scripps commences activities at its permanent facility, a description of the status of Scripps' activities in its permanent facility, including its educational and outreach programs.**

Scripps is not scheduled to commence operations in its Permanent Facility until July of 2007.

Section 9.3(c) **A schedule of the shares of stock (or other securities) held by Scripps as payment of the royalty referred to in Section 10.2(a) and a report on any trades or activity concerning such stock (or other securities);**

No stock or other securities are held by Scripps as payment of royalties from technology developed at Scripps Florida.

Section 9.4 **Annual Scientific Report. Scripps shall prepare the Annual Scientific Report that describes its scientific activities for Scripps Florida each year and deliver such annual report to Funding within one hundred twenty (120) days after the end of each fiscal year of Scripps. The form of the annual report will be substantially similar to the form Scripps uses at such time with respect to its California operations.**

See Appendix 3, The Annual Scientific Report for Scripps Florida for 2004.

Section 9.5 **Performance Expectations. Scripps, in cooperation with OTTED, shall report to Funding not less than annually on its progress in meeting certain performance expectations that reflect the aspirations of the Florida Governor and Legislature for the benefits accruing to Florida as a result of the Grant Funds. These reports shall include, but are not limited to, performance expectations addressing the following with respect to Scripps Florida;**

Section 9.5(a) **The number and dollar value of research grants obtained by Scripps with respect to Scripps Florida from the Federal Government or sources other than Florida;**

Scripps Florida scientists have been awarded 9 NIH Grants since the beginning of 2005. Those 9 awards provide annual grant funding in the amount of $2,378,490. In addition, a Scripps Florida scientist has been awarded a Research Grant from the Arthritis Foundation that provides annual funding in the amount of $170,596. Thus, to date, Scripps Florida scientists have been awarded annual extramural (non-SFFC) research funding totally $2,549,086.

In addition, The Scripps Research Institute and NeoRx Corporation (NASDAQ: NERX), a cancer therapeutics development company, have announced the first collaboration at Scripps Florida, focusing on discovering novel, small-molecule, multi-targeted, protein kinase inhibitors as therapeutic agents, including cancer treatments. NeoRx will provide $2.5 million over 26 months, approximately $140,000 of which will be paid in 2005, to support the research and will have the option to negotiate a worldwide exclusive license to any compounds developed through the collaboration.

Section 9.5(b) **The percentage of total research dollars received by Scripps from sources other than Florida, which is used to conduct research activities by Scripps in Florida;**

3.00% of total research dollars received were from sources other than Florida.

Section 9.5(c) **The number or value of patents obtained by Scripps with respect to Scripps Florida;**

As of June, 2005, 18 patent applications have been filed including 8 international applications filed under the Patent Cooperation Treaty. No value has been assigned to those patent applications.

Section 9.5(d) **The number or value of licensing agreements executed by Scripps with respect to Scripps Florida;**

Scripps Florida has successfully out-licensed 6 technologies to Novartis on a non-exclusive basis. In addition, Scripps Florida has entered into a number of in-license agreements with various entities. Two of those incoming licenses (Kalypsys and ExSAR) relate to the establishment of Scripps Florida's high-throughput screening program.

Section 9.5(e) **The extent to which research conducted by Scripps Florida results in commercial applications;**

While the research efforts in Florida are still relatively early in the life cycle of biotechnology commercialization, Scripps Florida was very pleased to announce recently that the biotech company NeoRx has enough belief in the Scripps Florida kinase program to commit $2.5 million in research funding to the project. As a result of this funding, NeoRx has obtained an option to license any discovery made during the course of the project. As this and other Scripps Florida discovery projects move forward, it is anticipated that direct commercial applications will become more prevalent.

Section 9.5(f) **The number of collaborative agreements reached and maintained with colleges and universities in Florida and with research institutions in Florida, including agreements that foster participation in research opportunities by public and private colleges and universities and research institutions in Florida with significant minority populations, including historically black colleges and universities;**

Scripps Florida scientists have been very active in establishing relationships with scientific colleagues both inside and outside of Florida. Formal collaborative relationships between Scripps Florida and a number of Florida colleges and universities have been established (See Table, below).

Collaborations with Florida Colleges & Universities

Lab	Initiated	Collaborator	Institution	Nature of Collaboration
Griffin	2/2005	Gregg Fields	FAU	Working on structural studies of hydrogen deuterium exchange on a matrix metallo-protease involved in cancer.
	11/2004	Herb Weissbach	FAU	Looking at inhibitors of methionine sulfoxide reductase from a structural standpoint. Submitted application for possible funding thru FAU.
	1/2005	Alan Marshall	FSU National High Magnetic Field Lab	Working with Dr. Marshall on an application for NCI funding.
Petrie Tsinoremas Pletcher Busby, J.	2/2005	William Harrington, M.D.	U of Miami School of Medicine	Looking for proteomic markers of HTLV-induced T-cell leukemias and lymphoma.

Collaborations with Florida Colleges & Universities (continued)

Lab	Initiated	Collaborator	Institution	Nature of Collaboration
Liang	2/2005	Yubo Sun	U of Miami	Writing a grant on osteoarthritis in a drug discovery application.
	9/2004	Salvatore Lepore	FAU	Contract synthesis. Contract is concluded.
	2/2005	Ross Kerr	FAU	Homeland security grant on bioterrorism, submitted in February.
Busby	11/2004	Dave Powell	University of Florida	Training a graduate student in IMAC technology to obtain phosphopeptide information from retinal samples.
	3/2005	Julie Maupin-Furlow	University of Florida	Phospho-protein analysis to identify transcription factors. This will also include training for students on IMAC technology.

In addition to those collaborations summarized above, Scripps has entered into a number of Material Transfer Agreements (MTAs) with Florida colleges and universities (Exhibit F). MTA are agreements between institutions that provide terms and conditions attendant to the exchange of biological materials between collaborators. As shown in Exhibit F, Scripps has entered into MTAs with the University of Florida, the University of South Florida, the University of Miami, Florida State University, and the University of Central Florida.

Still further, Scripps scientists (Dr. Richard Lerner, Dr. Jeff Kelly, Dr. Paul Schimmel) and Scripps Florida scientists (Dr. John Hogenesch, Dr. Pat Griffin, Dr. Harry Orf, Dr. Charles Weissmann, Dr. Chris Baker, Dr. Jennifer Busby, Dr. Teresa Reyes, Dr. Mike Chalmers) have participated in a large number of scientific meetings with colleagues at Florida colleges and universities (See Table, below).

Speaker/Lead Rep	Organization
Pat Griffin	Florida Trade Mission 2004
Pat Griffin	Panelist FIU Provost Series
Pat Griffin	ACS National Meeting
Harry Orf	Holy Cross Hospital
Charles Weissmann	Harvard Medical School, Warren Alpert Award
Pat Griffin	FAU Chemistry Series Seminar
Harry Orf	Byrd Alzheimer's Institute Brunch
Harry Orf	BioFlorida Conference - Keynote Address
Pat Griffin	FAU Collaboration
Pat Griffin	Life Sciences Forum
Chris Baker	Taras Oceanographic Foundation
Jennifer Busby	Lecture at Univ. of Florida to GS's on Mass Spec

Speaker/Lead Rep	Organization
Harry Orf	Jupiter Medical Center
Teresa Reyes	Wilkes Honors College FAU - Spring Research Day
John Hogenesch	University of Florida Collaboration Summit
Jeff Kelly	Moroso Motorparks Mustang Day

Section 9.5(g) **The number of collaborative partnerships established and maintained with businesses in Florida, including small businesses;**

Scripps Florida has had extensive discussions with IBM regarding the establishment of a supercomputer center that would be a resource for both Scripps Florida and Florida's colleges and universities. The concept as it currently stands is outlined as follows:

- The Florida Supercomputing Center will be a platform for advanced research and economic development. It will provide the marketing opportunity for the State as a premier technology and talent powered ecosystem. This will be a magnet for research talent attraction and advanced grant applications.
- The Center will be cooperatively funded by IBM, Scripps and the State's Colleges and Universities based on a usage model.
- IBM will invest in the Center and provide the Supercomputing: technology, maintenance, operations and IBM Researchers to collaborate with the Scripps and academic researchers.
- Scripps and IBM will jointly call on colleges and universities in the State to present the Center's technology, applications environment and business model.
- The Center will have both Blue Gene and Linux-based systems to allow maximal flexibility and computing power.

There is still much work to be done, but the concept of a supercomputer center that would be available to colleges and universities from across Florida is being actively pursued.

In addition, representatives of Scripps and Scripps Florida have participated in a large number of business outreach activities (see Table, below).

Speaker/Lead Rep	Organization
Paul Schimmel	Meeting with Sheridan Snyder of Upstate
Tom Gilmartin	Small Business Association Roundtable
Pat Griffin	Florida Trade Mission 2004
Erwin Owens	Business Development Board
Will Ray/Barbara Noble	BIO Florida 2004
Audric Dodds	Business Roundtable Meeting
Audric Dodds	NMSDC Tradeshow
Harry Orf	BioFlorida Conference - Keynote Address
Harry Orf	AIA Health Conference Panel
Audric Dodds	Latin Chamber of Commerce Small Business Show

Speaker/Lead Rep	Organization
Audric Dodds	Apple One Diversity Luncheon
Audric Dodds	South Florida Business Journal Excellence in Healthcare
Audric Dodds	BDB / Scripps Outreach Session
Audric Dodds	North Broward Hospital District Business Expo
Audric Dodds	Fluor/DRP Weitz/Scripps Small Business Outreach
Audric Dodds	Bizlift 2004
Audric Dodds	State of Florida Matchmaker
Harry Orf	Jupiter Medical Center
Richard Lerner	2005 FL Venture Capital Forum
Harry Orf	Gunster Yoakley Private Wealth Services Client Event
Harry Orf	Company A Science and Business Group
Harry Orf	Quantum Foundation Chairman
Harry Orf	Workforce Alliance mtg-Scripps Vision with Gov. Bush
Harry Orf	Economic Council Meeting Kravis Center
Harry Orf	Talk at IBM

Section 9.5(h) **The total amount of funding received by Scripps with respect to Scripps Florida from sources other than Funding, including a breakdown of amounts received from Grants and other sources.**

Scripps Florida has received almost $2.4 million dollars in external funding from the NIH and Arthritis Foundation. In addition, Dr. Chris Liang of Scripps Florida has entered into a Specific Funding Project NeoRX, which project provides Dr. Liang's lab with $2,500,000 dollars.

Other Revenue sources	$118,000	
Grant Awards ($170,722 expended)	$1,706,000	(through 6/30/05)
Contributions at net present value	$1,379,000*	
Palm Beach (grant of temporary space)	$2,270,000*	

*The amount reported above was determined in accordance with generally accepted accounting principles. Therefore, certain non-cash items, such as promises to give and the value of the use of temporary facilities at no cost, are reflected at their estimated net realizable value.

**The value of construction paid for by the County of Palm Beach for either the permanent facility or the temporary facility at FAU - Jupiter has not been included.

Section 9.5(i) **The number or value of spin-off businesses created in Florida as a result of commercialization of the research of Scripps Florida.**

To date, no spin-off businesses have been created.

Section 9.5(j) **The number or value of businesses that locate in Florida as a result of Scripps Florida.**

Delays in approving and funding construction of the Scripps Florida Permanent Facility together with pending litigation challenging development of Mecca Farms have compromised the ability of the State of Florida, the County of Palm Beach and Scripps to definitively attract businesses to Florida. Despite these obstacles, California-based Burnham Institute, the Cleveland Clinic and New York-based Cornell University Hospital for Special Surgery have all engaged Scripps and the county in talks about establishing a presence in Florida.

Section 9.5(k) **The establishment and implementation of policies to promote supplier diversity using the guidelines developed by the Office of Supplier Diversity under Section 287.09451, Florida Statutes, and to comply with the ordinances, including any small business ordinances, enacted by applicable local governments and which are applicable to Scripps Florida.**

Mr. Audric Dodds and Mr. Tom Gilmartin, the Director of Procurement at Scripps La Jolla have been very active in working to insure supplier diversity for Scripps Florida. In the last year, Mr. Dodds and Mr. Gilmartin have conducted outreach activities at a minority vendors meeting, a Palm Beach County Small Business Assistance vendor summit, a Florida Hispanic Chamber meeting, a small business association roundtable, an NMSDC tradeshow, a Latin Chamber of Commerce small business show, an Apple One diversity luncheon, a Business Development Board outreach session, a North Broward Hospital District business Expo, a Bizlift 2004 meeting, and a State of Florida Matchmaker meeting.

To promote the growth of local and state Small Business Enterprises (SBE) and Minority/Women Owned Businesses (MWBE), the County of Palm Beach and Scripps established a 15% participation goal for the Scripps Florida project. To guide the project to this goal a SBE/MWBE steering committee was established consisting of members from Scripps, Fluor and Weitz-DPR. In addition, two local consulting firms were added to our team, MCO Construction & Services and L.B. Limited and Associates. Both MCO and L.B. Limited are well known in the SBE/MWBE community as well as Palm Beach County's Office of Small Business Assistance (OSBA). A monthly report is provided to the Director of the county's OSBA office to communicate the program's activities and progress towards its goals.

Much of the efforts to date have focused on communicating to the SBE/MWBE community the many opportunities that exist for them in the project. To date four "Out Reach" workshops have been held, two in November 2004 and two in June of this year. These workshops were well attended and provided the SBE/MWBE community a valuable overview of the project and how best to pursue opportunities within the project. Another communication tool has been an aggressive phone campaign to insure that all potential SBE/MWBE bidders are informed of upcoming bid dates. Phone calls were placed to every certified SBE member. In addition follow-up e-mail and faxes were also sent.

Since SBE's are inherently limited in size and resources one approach to aid in their participation is identifying larger sub-contractors that might potentially team with a SBE/MWBE contractor. This effort is carried out during each pre-bid meeting held by Weitz-DPR for the various construction packages. A segment of all pre-bid meetings has devoted time to stressing the project goals as it pertains to SBE/MWBE participation. All SBE/MWBE members at the pre-bid meetings are identified so that potential subcontractors have an opportunity to talk with them one-on-one. Phone calls have been

placed to each Weitz-DPR pre-qualified subcontractor to discuss opportunities pertaining to specific SBE/MWBE firms that have the potential to be a teaming partner.

Section 9.5(l) **The designation by Scripps of a representative to coordinate with the Office of Supplier Diversity.**

As reported last year, Mr. Audric Dodds is the designated representative to the Office of Supplier Diversity

Section 9.5(m) **The establishment and implementation of a program to conduct workforce recruitment activities at public and private colleges and universities and community colleges in Florida, regardless of their size, which request the participation of Scripps Florida.**

In the past 12 months, various officials of Scripps have participated in almost 100 business and community outreach programs.

Section 4.4(c)1 **Scripps shall create new jobs at Scripps Florida, the number of which shall be measured at the end of each calendar year. For Year 2, ending December 31, 2005, Scripps shall have created a total of 168 jobs. In any given year, SFFC may allow Scripps to deviate downward from the job creations goal to achieve flexibility.**

As reported in Section 9.3(b)1, above, Scripps created 87 new jobs between July 1, 2004 and June 30, 2005. As of June 30, 2005, Scripps employed a total of 107 people. By August 31, 2005, that total had risen to 131 jobs. It can be seen that Scripps has met it minimum Goal (126 jobs) with six months to go in Year 2.

Section 4.4(c)2 **Beginning 18 months after Scripps' occupancy of it permanent facility, Scripps shall obtain $100,000 of non-state funding for each full-time equivalent tenured track faculty member employed at Scripps Florida.**

The permanent facility is not presently scheduled for completion until July of 2007. As an indication of Scripps' accomplishments in obtaining external funding and as reported in Section 9.5(a) above, Scripps Florida scientists have been very successful in obtaining non-state funding. In calendar year 2005, the total amount of such non-state funding is about $4,000,000.

Section 4.4(c)3 **No later than 3 years after occupancy of its permanent facility, Scripps shall apply to the relevant accrediting agency for accreditation of its Florida graduate program.**

No report is due until July, 2010 (3 years after occupancy of the Scripps Florida Permanent Facility).

Section 4.4(c)4 **Scripps shall purchase equipment for Scripps Florida according to an agreed upon schedule. Equipment purchases are to be measured as of January 31st of each year. For the year ending January 31, 2006, Scripps shall have purchased $15 million dollars of equipment.**

As shown in Appendix 2, between October 1, 2004 and June 30, 2005 Scripps purchased $12,392,524.41 of equipment.

1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year
$10	$15	$15	$*	$*	$*	$*

*The total amount of scheduled equipment purchases during Years 4 through 7 will be $5 million. Scripps shall supplement this schedule in the future to provide an allocation of such $5 million for these years.

While equipment acquisitions for the nine months ended June 30, 2005 total about $12,400,000, Scripps projects total equipment acquisition in Year Two to exceed $17,100,000.

Section 4.4(c)5 **Doctoral Research. No later than 18 months after occupying its permanent facility, Scripps shall establish a program for qualified graduate students from Florida universities permitting them access to the facility for doctoral, thesis-related research.**

Although Scripps Florida has not yet occupied its Permanent Facility, Scripps has cooperated with Enterprise Florida in establishing and funding a Graduate Program at Oxford University. Mr Daniel Witter, a Florida resident, is fully registered at Oxford, aiming for an OU Chemistry 4-year D.Phil. He is funded by the Florida-TSRI enterprise (Scripps) and his supervisor, Paul Wentworth, has a joint Scripps-Oxford appointment.

In addition, the outstanding faculty of Scripps Florida has attracted 9 graduate students from its California-based graduate program.

Section 4.4(c)6 **Summer Internships. No later than 18 months after occupancy of the permanent facility, Scripps shall establish a summer internship for high school students.**

Section 4.4(c)7 **Research Program. No later than three years after occupancy of the permanent facility, Scripps shall establish a research program for middle and high school teachers.**

Although no report is due until July 2010 (18 months to 3 years after occupancy of the Scripps Florida Permanent Facility), Scripps Florida has made a commitment to use its intellectual and material resources to expose high school students, middle/high school science teachers and undergraduates to contemporary issues in biomedical research, to provide intensive, hands-on laboratory experiences, and to encourage students to pursue scholarship and careers in the biological and chemical sciences.

The teacher participants were:

- Angela Bischoff of Lake Worth, who teaches biology, environmental science, and chemistry at Park Vista Community High School, Lake Worth;
- Jairo M. Garcia of Delray Beach, who teaches science, molecular biology, and environmental science at Spanish River High School, Boca Raton; and
- Brian L. Nelson of Green Acres, who teaches chemistry and integrated science at Wellington Community High School, Wellington.

The student interns, all juniors, were:

- Dionda T. Burney, 16, of West Palm Beach, a junior at Suncoast High School, Riviera Beach;
- Austin L. Hurd, 17, of Boynton Beach, a junior at Park Vista Community High School, Lake Worth;
- Anand A. Parekh, 16, of Boynton Beach, a junior at Atlantic Community High School, Delray Beach (Anand's science teacher, Scott Morone, participated in the Scripps Research internship program on the La Jolla campus in 2004); and
- Stephanie Y. Wu of Boynton Beach, a junior at Spanish River Community High School, Boca Raton.

Students and teachers spent seven weeks in their assigned laboratories working on their projects. A seminar series for the interns was instituted. At the end of the seven weeks all of the interns invited mentors, friends, family and teachers/principals to a seminar where they did a 20-minute summary of their projects finished off with lunch and presentation of a certificate.

In addition, representatives of Scripps and Scripps Florida have participated in a large number of educational outreach programs (see Table, below).

Speaker/Lead Rep	**Organization**
Chris Baker	PBC School District
Chris Baker	Jupiter High School
Harry Orf	PB County School District Mtg
Harry Orf	Indian River Community College Mtg
Harry Orf	St. Michael's Independent School
Harry Orf	Palm Beach Educational Association Mtg
Harry Orf	Florida Summit on Math and Science Education
Harry Orf	Florida Memorial College Board of Directors
Harry Orf	Workforce Alliance - Educational Conf. Call
Harry Orf	Florida Summit on Math and Science Education
Harry Orf	PBC Middle School Science Teachers
Harry Orf	PBC High School Science Teachers
Harry Orf	Educational Summit
Harry Orf	Florida Memorial College
Harry Orf/Candy Walker	Carol City Middle School - "Our World" Lecture

Speaker/Lead Rep	Organization
Harry Orf	FAU Honors College Counselors
Harry Orf	Indian River Community College
John Hogenesch	FAU/SF Advanced Tech Summit
Jennifer/Scott Busby	Wellington Landings Middle School Career Day
Harry Orf	Indian River Community College Address
Harry Orf	Academy of Environmental Science & Technology
Harry Orf/Will Ray	Channel 20 Interview
Harry Orf	Educational Council Martin County
Harry Orf	Tape "Our World" seminar for PBC School District
Harry Orf	St. Michael's Academy Intro to Science Lesson
Orf, Hogenesch, et al.	Collaborative talks with University of Florida
Harry Orf	Speak at St. Michael's Academy Graduation
Harry Orf	IRCC Science Class to HS and MS Teachers
Harry Orf	BIO 2005
Harry Orf	Indian River Community College Chem Demo

Section 4.4(c)8 **Adjunct Professors. No later than 18 months after occupancy of the permanent facility, Scripps shall establish a program for adjunct professors.**

No report due until January 2009.

Section 4.4(c)9 **Access for Science Projects. No later than 6 months after commissioning its high throughput technology, Scripps shall establish a program to allow open access for qualified science projects.**

OPEN ACCESS PROGRAM FOR FLORIDA INSTITUTIONS

In the past year, Scripps Florida has hired 81 scientists from academia, large pharma, and biotech into Drug Discovery and Advanced Technologies. Our goal is to provide a competitive edge to other Florida institutions by facilitating access to technological capabilities that may not be available at their institution. Access to these technologies will be afforded through a web-based application process that will vary depending on the complexity of the submitted proposal. A team of scientists will then evaluate written proposals based upon scientific merit and make recommendations on how to allocate resources.

Genomics: The Scripps Florida Genome Technologies group provides numerous gene profiling strategies that facilitate the study of RNA expression dynamics at whole genome levels and genome scale tool sets aimed at directly assessing gene function in high throughput cell-based models of human disease. Facilities also exist to support large-scale genotyping projects and high throughput resequencing.

Informatics: Staff are available to provide consulting services to enable Scripps Florida investigators and select outside collaborators to apply bioinformatics approaches to address their research questions. Core personnel are available to identify solutions which may include genome annotation and sequence analysis, statistical and computational analyses for transcriptional profiling and SNP mapping arrays, homology modeling, candidate gene analysis, and analyses of high-throughput screening data sets.

Proteomics: The ***Scripps Florida Proteomics Group*** provides general mass spectrometry capabilities for small molecule protein and peptide identification using LCMS and LCMS/MS. Expertise further exists for characterization of post-translational modifications on proteins and peptides.

uHTS: Proprietary technologies will be available by the end of 2005 that enable rapid and high quality screening campaigns of multiple targets against the Scripps Florida library of approximately 650,000 compounds. The centerpiece of this technology platform is the Kalypsys uHTS System with a throughput of 500,000 assay wells per day and an on-line storage capacity of 750,000 compounds. The uHTS system was approved for purchase by the Board of Trustees last November and construction of the customized system began in early January 2005. Despite a very aggressive timeline, we are on target to ship the completed system by end of September. On site validation and training should be completed by mid-November and the system will be ready to run validated assays early 2006.

Section 4.4(c)10 **Collaboration with Florida Colleges and Universities. Beginning June 2004, Scripps shall commence collaborative efforts with Florida public and private colleges and universities, and shall continue cooperative collaboration through the term of the Agreement.**

See the reply to Section 9.5(f) above. Our goal is to develop effective collaborations with Florida research groups wherever possible through peer-to-peer collaborations, the most common vehicle for stimulating scientific discovery. To date, nine collaborations have been initiated and others have been proposed. Typically, scientists discover a colleague with mutual interests through publications, seminars, committees, and various professional networking organizations. Once contact has been made, the scientists establish a research program and identify the roles and contributions of each participant. Multiple collaborators from several institutions is not uncommon. To expedite their ability to initiate their joint research while protecting the interests of the associated institutions, Scripps has engaged in a series of discussions with several Florida institutions on a "Master Collaborative Agreement". Several drafts of the Master Agreement as well as templates for Material Transfer Agreements, Confidential Disclosure Agreements have been exchanged between University of Florida and Scripps. We expect to have a version for wider dissemination in the near future.

Section 4.4(c)11 **Seminar Series. Beginning 18 months after Scripps occupies the permanent facility, Scripps shall establish an annual seminar series featuring a review of the science work done by Scripps and its collaborators.**

Scripps Florida is not scheduled to occupy its Permanent Facilities until July of 2007. Thus, the establishment of a seminar series is not scheduled to begin until January of 2009. Scripps and Scripps Florida, however, have already, four and one-half years ahead of schedule, established two separate seminar series.

Collaborative seminars feature prominent Florida-based speakers from the academic, biotechnology or pharmaceutical communities and focus on topics within the broad fields of biomedical science, advanced technologies applied to biomedical research, and drug discovery. They serve as a major foundation for creating knowledge- and technology-sharing opportunities, team building, and collaborations among biomedical researchers between Scripps Florida and other Florida research and academic institutions and companies. The sessions are open to interested professionals within the Scripps Florida and Florida scientific communities.

2005 Collaborative Seminar Presenters

March 24, 2005	**Speaker: Huntington Potter** Dr. Potter is the CEO and Scientific Director of the Johnnie B. Byrd Sr. Alzheimer's Center and Research Institute, the Eric Pfeiffer Endowed Chair for Research on Alzheimer's Disease at the Suncoast Gerontology Center, and Professor of Biochemistry and Molecular Biology at the University of South Florida College of Medicine. **Lecture – "Role of Inflammation and Chromosome Missegregation in Alzheimer's Disease"**
April 14, 2005	**Speaker: Gregg B. Fields** Dr. Fields is a Professor and Chairman of the Department of Chemistry & Biochemistry at Florida Atlantic University. **Lecture – "Proteolytic Profiling of the Melanoma Microenvironment: Implications for Therapeutic Intervention"**
May 12, 2005	**Speaker: Art Edison** Dr. Edison is an Associate Professor in the Department of Biochemistry and Molecular Biology at the University of Florida, as well as the Director of the Advanced Magnetic Resource Imaging and Spectroscopy Facility. He is additionally a member of the McKnight Brain Institute, the University of Florida Center for Structural Biology, and the National High Magnetic Field Laboratory at the University of Florida. **Lecture – "NMR Technology for Small Volume Samples and Two Short Stories in Unstructural Biology"**
June 9, 2005	**Speaker: Herbert Weissbach** Dr. Weissbach is a Distinguished Research Professor in the Department of Biological Sciences at Florida Atlantic University. He is further the head of the Center for Molecular Biology and Biotechnology at FAU. **Lecture – "Oxidative Damage and Aging: Role of the Methionine Sulfoxide Reductase System"**

2005 Collaborative Seminar Presenters (continued)

July 14, 2005	**Speaker: Alan Marshall** Dr. Marshall is a Professor in the Department of Chemistry and Biochemistry at the Florida State University and Director of the ICR Program at the National High Magnetic Field Laboratory. **Lecture – "Accurate Mass Measurement: Taking Full Analytical Advantage of Nature's Isotopic Complexity"**
August 11, 2005	**Speaker: Choogon Lee, FSU** Dr. Lee is an Assistant Professor in the Department of Biomedical Sciences at the Florida State University. **Lecture – "Posttranslational mechanisms regulate the mammalian circadian clock"**
September 22, 2005	**Speaker: Dr. Steve Benner, UF** Dr. Benner is a Professor in the Department of Chemistry at the University of Florida. **Lecture** – to be announced.
November 17, 2005	**Speaker: Dr. Glen Barber, UM** Dr. Barber is a Professor in the Department of Microbiology and Immunology at the University of Miami School of Medicine. **Lecture** – to be announced.

A second seminar series comprises scientific presentations from world-renown researchers who have been invited to Scripps Florida's temporary space on the Jupiter Campus of Florida Atlantic university. In the last year, over twenty-five outside speakers have visited Scripps Florida.

Section 4.4(c)12 **Collaboration with OTTED. Beginning June 2004, Scripps shall commence collaboration efforts with the Office of Tourism, Trade and Economic Development by complying with reasonable requests for cooperation in economic development efforts in the biomed/biotech industry, and no later than July 2004, Scripps shall designate a person who shall be charged with assisting in these collaborative efforts.**

Dr. A. Donny Strosberg, a Professor at Scripps Florida, and Dr. Debra Mosca, Senior Director of Business Development at Scripps, made presentations at the Inaugural Bioscience Stakeholders Meeting sponsored by the Business Development Board of Palm Beach County on June 29, 2005 (Appendix 4). The meeting was also attended by Dr. Harry Orf of Scripps Florida and Dr. Thomas Northrup of Scripps.

In addition, more than 172 events have occurred to foster business, community, education, and scientific relations between various organizations and Scripps Florida. **Business** outreach efforts include participation in meetings facilitated by local business and government agencies such as the Office of Tourism, Trade and Economic Development, Palm Beach County Business Development Board, and the Metro Orlando

Economic Development Commission. Similarly, **community** efforts involve presentations to local residential groups, various cultural organizations, and specialty groups. Numerous **educational** programs have been implemented including presentation to elementary, secondary, and high schools, selecting high school students as interns, and hands-on workshops. **Scientific** outreach spans a variety of interactions from seminars and workshops, to peer-to-peer discussions.

In addition, representatives of Scripps and Scripps Florida have participated in numerous community outreach programs (see Table, below).

Speaker/Lead Rep	**Organization**
Pat Griffin	Broward County Alliance
Barbara Noble	World Professional Organization
Harry Orf	Urban Land Institute
Candy Walker	Palm Health Foundation
Harry Orf	Smith Barney Client Group Meeting
Harry Orf	Voter's Coalition Mtg
John Hogenesch	WPBR Radio Channel 1340
Harry Orf	Brandeis National Women's Committee
Harry Orf	Lost Tree Village Community
Harry Orf	Real Estate Forum - Tower Club
Harry Orf	Lost Tree Village Community
Harry Orf	South Florida Fair
Harry Orf	Tequesta/Jupiter Chamber - Keynote Address
Harry Orf	South Florida Fair
Harry Orf	Women's Professional Network
Harry Orf	Frenchman's Creek HOA
Harry Orf	Lyric Theater
Harry Orf	Palm Beach County Days
Harry Orf	Jupiter Farms Elementary
Harry Orf	Tangerine Theatre Distinguished Lecture
Harry Orf	Economic Council BOD talk at Kravis Center
Harry Orf	SE Florida Bioscience Consortium
Harry Orf	Lifelong Learning at FAU
Harry Orf	Keynote Address Phi Beta Kappa
Harry Orf	Leadership Florida Address at FAU
Harry Orf	Lifetime Learning at PB Community College
Harry Orf	John's Island Club Address
Harry Orf	Western Community Pacesetters for Boy Scouts
Harry Orf	Indian River Community College
Harry Orf	Women in Construction Address

Speaker/Lead Rep	Organization
Harry Orf/Steve Kay/Charles W/Claes	Society of Four Arts
Harry Orf	Leadership Palm Beach County Youth
Harry Orf	BDB Luncheon
Harry Orf/Will Ray	Channel 20 Interview
Harry Orf	Leadership PBC Youth Graduates
Harry Orf	Economic Council Martin County w/ BioFlorida
Harry Orf	Tape TV Interview with Will Ray
Harry Orf	BDB Summit Regional Luncheon - Panel
Harry Orf	Speak at St. Michael's Academy Graduation
Harry Orf	Nabi dedication with Gov. Bush
Harry Orf	Palm Beach Town Council
Candy Walker	Jupiter Kiwanis
Harry Orf	Jupiter/Tequesta Kiwanis
Harry Orf	BIO 2005
Candy Walker/Audric Dodds	Urban League Young Professionals Meeting
Candy Walker	Riviera Beach Kiwanis

APPENDICES

1. **Unaudited Financial Statements**
2. **Equipment Purchase List**
3. **Annual Scientific Report for 2004**
4. **BDB Stakeholders Meeting Minutes**

TAB B
Financial Statements

SCRIPPS FLORIDA

A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

FINANCIAL STATEMENTS FOR THE NINE MONTHS
ENDED JUNE 30, 2005

- UNAUDITED -

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

BALANCE SHEET
AS OF JUNE 30
(In Thousands)

- UNAUDITED -

ASSETS	2005	2004
Current Assets:		
Cash and cash equivalents	$ 692	$ 113
Investments	18,071	7,350
State and County grants receivable	29,629	10,401
Prepaid rent, other and pledges receivable - net	346	107
Total current assets	48,738	17,971
Property - net	25,518	552
Prepaid rent	208	
Pledges receivable - net	1,149	697
TOTAL ASSETS	$ 75,613	$ 19,220
LIABILITIES AND NET ASSETS		
Current Liabilities:		
Accounts payable and accrued expenses	$ 1,780	$ 244
Interdivisional payable	362	208
Total current liabilities	2,142	452
Deferred revenue	11,318	
Total liabilities	13,460	452
Net Assets:		
Unrestricted	14,340	447
Temporarily restricted	47,813	18,321
Total net assets	62,153	18,768
TOTAL LIABILITIES AND NET ASSETS	$ 75,613	$ 19,220

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS
FOR THE NINE MONTHS ENDED JUNE 30
(In Thousands)

- UNAUDITED -

	2005	2004
CHANGES IN UNRESTRICTED NET ASSETS:		
Revenue:		
Grants	$ 25,584	$ 3,388
Other revenue and support	318	99
Investment income	979	57
Net assets released from restriction	714	
Total revenue	27,595	3,544
Expenses:		
Research	12,537	1,608
Postgraduate and graduate education	41	
Management and general	1,792	1,275
Fund raising	461	214
Total expenses	14,831	3,097
Increase in unrestricted net assets	12,764	447
CHANGES IN TEMPORARILY RESTRICTED NET ASSETS:		
Grants	31,067	17,413
Other support and contributions		912
Investment income		(4)
Net assets released from restriction	(714)	
Increase in temporarily restricted net assets	30,353	18,321
INCREASE IN NET ASSETS	43,117	18,768
NET ASSETS AT BEGINNING OF YEAR	19,036	
NET ASSETS AS OF JUNE 30	$ 62,153	$ 18,768

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF CASH FLOWS
FOR THE NINE MONTHS ENDED JUNE 30
(In Thousands)

- UNAUDITED -

	2005	2004
CASH FLOWS FROM OPERATING ACTIVITIES:		
Increase in net assets	$ 43,117	$ 18,768
Adjustments to reflect cash flows provided by operating activities:		
Depreciation and amortization	444	
Realized and unrealized (gain) loss on investments	(12)	4
Changes in assets and liabilities:		
Grants, prepaid rent, other and pledges receivable - net	(20,466)	(11,205)
Accounts payable and accrued expenses	(1,631)	452
Deferred revenue	6,907	
Net cash provided by operating activities	28,359	8,019
CASH FLOWS FROM INVESTING ACTIVITIES:		
Change in investments	(7,993)	(7,355)
Property additions	(19,914)	(551)
Net cash used in investing activities	(27,907)	(7,906)
NET INCREASE IN CASH AND CASH EQUIVALENTS	452	113
BEGINNING CASH AND CASH EQUIVALENTS	240	
ENDING CASH AND CASH EQUIVALENTS	$ 692	$ 113

See accompanying note to financial statements.

SCRIPPS FLORIDA –
A Division of The Scripps Research Institute

NOTES TO FINANCIAL STATEMENTS
FOR THE QUARTER ENDED JUNE 30, 2005

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General – A division of The Scripps Research Institute ("TSRI") known as "Scripps Florida," was established in January 2004 with a $310 million grant from the State of Florida ("Florida"). For Florida, the grant facilitates the establishment and operation of a biomedical research institution for the purposes of enhancing education and research and promoting economic development and diversity. For TSRI, the grant provides a unique opportunity to enhance investigations relevant to current medical needs and human diseases by combining high through-put technologies (leading-edge automated systems that screen compound libraries against specific validated targets at very high speeds) with basic research. The facilities for Scripps Florida will be developed with a grant from the County of Palm Beach (the "County"), which has agreed to provide land and funding for the development of permanent facilities and to make temporary space available during such development. In January 2005, Scripps Florida relocated from temporary space at Florida Atlantic University - Boca Raton to the temporary facilities constructed by the County on the Florida Atlantic University ("FAU") campus in Jupiter, Florida.

The State of Florida's Grant. Florida created the Scripps Florida Funding Corporation ("Florida Funding"), a nonprofit Florida corporation, to administer and disburse Florida's grant funds to TSRI for the benefit of the Scripps Florida division. Florida Funding will disburse grant funds to TSRI on an annual basis over the course of approximately seven years. TSRI's Business Plan for the Scripps Florida division provides for annual disbursements ranging from $20 million to $70 million. Florida Funding holds a security interest in certain equipment acquired with grant funds provided by Florida.

In order to receive the funds, TSRI must submit an annual funding request, together with various progress reports, and must maintain compliance with certain covenants and conditions. In addition, Scripps Florida must create a certain number of new jobs each year. Disbursement of Florida grant moneys is subject to the approval of a majority of the Florida Funding board of directors, and Florida Funding may reduce or eliminate funding in any year if TSRI has ceased operations in Florida or has failed to submit a written commitment to continue operations the following year. In addition, Florida Funding may reduce or eliminate grant funding in the year following the occurrence of certain events, including, among others, a knowing misrepresentation in the annual funding request, TSRI's declaration of bankruptcy, or the loss of TSRI's tax-exempt status.

TSRI's Business Plan provides for occupancy of the permanent Scripps Florida facilities in the third quarter of 2006. However, the Florida grant contains a force majeure provision that allows for a four-year extension of the Florida grant funding schedule if, due to certain enumerated events, TSRI is unable to occupy the permanent facilities as contemplated and, thus, is unable to achieve any required deadlines.

The County Grant. The grant from the County provides for both temporary and permanent facilities. The grant for the permanent facilities includes a 30-year land lease and provides funding for construction of the permanent facilities.

The Temporary Facilities. The County has committed $12 million for the construction of approximately 41,600 square feet of laboratory and laboratory support space on the FAU campus located in Jupiter, Florida. The grant is part of a separate agreement between the County and FAU. TSRI has no rent obligation but must reimburse FAU for certain services such as maintenance, security and utilities. If TSRI's tenancy continues beyond August 2006, TSRI must pay rent at the rate of $55,400 per month. However, if the permanent facilities are not completed by March 2008, TSRI must negotiate an extension of the lease or make other arrangements until the permanent facilities are ready for occupancy.

The Land Lease and the Permanent Facilities. As a condition to hosting the site of the Scripps Florida division, the County purchased approximately 1,900 acres known as the Mecca site ("Mecca") and agreed to lease 100 acres of that site to TSRI for 30 years. TSRI's lease payments will be $1 per year. The County grant provides $137 million for the construction of the permanent facilities on the 100 acres at Mecca. TSRI is responsible for the design and construction of the permanent facilities.

Pursuant to the County grant, TSRI also is obligated to create 545 new jobs by February 6, 2011 at salaries, on average, that exceed the average salaries in the County. If TSRI successfully creates such jobs, TSRI may continue to occupy the permanent facilities, and the County will continue the land lease until February 6, 2034. If the 545 jobs exist on February 6, 2011 and at the end of each subsequent year until February 6, 2034, title to the 100 acres at Mecca will transfer to TSRI. In the event that TSRI is unsuccessful in creating 545 new jobs by, February 6, 2014, which includes a three year cure period, title to the permanent facilities will revert to the County, and the land lease for the 100 acres at Mecca will terminate.

If TSRI fails to meet its contractual obligations to Florida Funding or the County, any unexpended grant funds and property purchased with grant funds will revert to Florida or the County, as appropriate. TSRI, however, will not be obligated to repay any previously expended grant funds, provided such expenditures were in accordance with the terms of the respective grant.

The ability of TSRI to meet its performance expectations under the State agreement depends, to some extent, upon its ability to occupy its permanent facility as contemplated by its Business Plan. The County delivered a buildable site to TSRI on Mecca in May, 2005. Although actual and other anticipated litigation and other matters involving the Mecca site may result in delays in completion of the permanent facility, vertical construction is scheduled to begin in September 2005.

Revenue Recognition – Grant funds received from Florida Funding are classified as unrestricted revenue in the year of receipt. Unexpended grant funds are reported as increases in temporarily restricted net assets.

The estimated fair rental value of the County grant for use of temporary facilities applicable to future periods, is reported as prepaid rent and an increase in temporarily restricted net

assets. The estimated fair value of the use of the temporary facilities in the current year is reflected as grant income and rent expense.

Challenges to development of the Mecca site have been made, and these challenges may delay TSRI's ability to construct and occupy the permanent facilities as originally anticipated. The extent of such delay and the amount of potential cost overruns, if any, are not known at this time. Due to these challenges and other uncertainties, the County grant funds received for the construction of permanent facilities are recorded as construction in process (or property, upon completion) and deferred revenue. Depreciation will commence upon occupancy and a like amount of grant revenue will be recorded. At the appropriate time when fewer uncertainties exist, the remaining balance in the deferred revenue account will be recognized as temporarily restricted grant revenue and released to unrestricted operations ratably, over the remaining life of the County grant.

Other temporarily restricted net assets result from contributions designated by donors for use in future periods, or for specific research projects and are reported as increases in temporarily restricted net assets. Restricted contributions whose restrictions are met in the same reporting period are reported as unrestricted support. Temporarily restricted net assets are reported as unrestricted net assets released from restrictions when the restrictions have been satisfied.

Cash and Cash Equivalents — Liquid investments, which fund the daily operating activities of Scripps Florida and have a maturity of three months or less, are reported as cash and cash equivalents.

Investments — Investments are carried at fair value, which is generally determined by quoted market prices provided by independent outside valuation services. Current investments include unrestricted and temporarily restricted investments, which are available for expenditure within one year.

Pledges Receivable – Pledges receivable are recorded at full value and discounted at a rate that reflects the risk involved. A provision for uncollectible accounts is calculated based on specific identification of receivables for which collection is uncertain.

Property & other assets — Fixed and other assets with a cost of more than $3,500 are capitalized and depreciated over their estimated useful lives. Fixed and other assets with a cost of between $3,500 and $50,000 are depreciated or amortized in the fiscal year following acquisition. For acquisitions of more than $50,000 but less than $1 million, a full year of depreciation or amortization is reported if the asset was acquired in the first six months of any fiscal year. Depreciation or amortization commences in the following fiscal year for acquisitions of more than $50,000 but less than $1 million acquired in the second six months of any fiscal year. Depreciation and amortization for assets with an acquisition cost of more than $1 million commences when the asset is placed in service.

Transactions with The Scripps Research Institute — As a division of TSRI, the accompanying financial statements may not be representative of the financial condition and results of operations that would have occurred if Scripps Florida had been operated as an independent entity.

The cost of the services that are allocated to Scripps Florida are based on actual direct costs incurred or on TSRI's estimate of expenses relative to the services provided. However,

there has been no study or any attempt to obtain quotes from third parties to determine what the cost of obtaining such services from third parties would have been. The resulting inter-divisional payable is settled on a periodic basis.

Use of Estimates and Assumptions – Management uses estimates and assumptions in preparing financial statements in accordance with generally accepted accounting principles in the United States of America. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could vary from the estimates that were used.

Legal Matters – The Mecca site, which is the site agreed upon by the County and TSRI for construction of the Scripps Florida permanent facility, is presently facing legal challenges. The legal challenges have been filed by coalitions of environmental groups concerned about the environmental impact of building out Mecca. The challenges to date allege procedural improprieties on behalf of the County. TSRI has been named as a co-defendant in one such challenge based on the contractual relationship between TSRI and the County. Another complaint, filed in December 2004 by two residents of the County, alleges the County, TSRI and the State of Florida with a violation of the State of Florida's civil racketeering statute in connection with the County's acquisition and proposed development of the Mecca site for Scripps Florida's permanent facilities. TSRI believes that the complaints are without merit and will, if required, is vigorously defending against the allegations. The County has delivered Mecca to TSRI and vertical construction is scheduled to begin in September 2005 with anticipated completion in July, 2007.

SCRIPPS FLORIDA

A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

FINANCIAL STATEMENTS FOR THE SIX MONTHS ENDED MARCH 31, 2005

- UNAUDITED -

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

BALANCE SHEET
AS OF MARCH 31
(In Thousands)

- UNAUDITED -

ASSETS	2005
Current Assets:	
Cash and cash equivalents	$ 2,653
Investments	12,049
State and County grants receivable	43,775
Prepaid rent, other and pledges receivable - net	1,527
Total current assets	60,004
Property - net	22,678
Prepaid rent	520
Pledges receivable - net	1,149
TOTAL ASSETS	$ 84,351
LIABILITIES AND NET ASSETS	
Current Liabilities:	
Accounts payable and accrued expenses	$ 4,540
Interdivisional payable	1,316
Total current liabilities	5,856
Deferred revenue	10,938
Total liabilities	16,794
Net Assets:	
Unrestricted	11,810
Temporarily restricted	55,747
Total net assets	67,557
TOTAL LIABILITIES AND NET ASSETS	$ 84,351

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS FOR THE SIX MONTHS ENDED MARCH 31
(In Thousands)

- UNAUDITED -

	2005
CHANGES IN UNRESTRICTED NET ASSETS:	
Revenue:	
Grants	$ 17,611
Other revenue and support	233
Investment income	393
Net assets released from restriction	396
Total revenue	18,633
Expenses:	
Research	6,976
Management and general	1,051
Fund raising	372
Total expenses	8,399
Increase in unrestricted net assets	10,234
CHANGES IN TEMPORARILY RESTRICTED NET ASSETS:	
Grants	37,698
Other support and contributions	985
Net assets released from restriction	(396)
Increase in temporarily restricted net assets	38,287
INCREASE IN NET ASSETS	48,521
NET ASSETS AT BEGINNING OF YEAR	19,036
NET ASSETS AS OF MARCH 31	$ 67,557

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF CASH FLOWS
FOR THE SIX MONTHS ENDED MARCH 31
(In Thousands)

- UNAUDITED -

	2005
CASH FLOWS FROM OPERATING ACTIVITIES:	
Increase in net assets	$ 48,521
Adjustments to reflect cash flows provided by operating activities:	
Depreciation and amortization	151
Realized and unrealized gains on investments	(7)
Changes in assets and liabilities:	
Grants, prepaid rent, other and pledges receivable - net	(36,106)
Accounts payable and accrued expenses	2,083
Deferred revenue	6,527
Net cash provided by operating activities	21,169
CASH FLOWS FROM INVESTING ACTIVITIES:	
Change in investments	(1,976)
Property additions	(16,780)
Net cash used in investing activities	(18,756)
NET INCREASE IN CASH AND CASH EQUIVALENTS	2,413
BEGINNING CASH AND CASH EQUIVALENTS	240
ENDING CASH AND CASH EQUIVALENTS	$ 2,653

See accompanying note to financial statements.

SCRIPPS FLORIDA –
A Division of The Scripps Research Institute

NOTES TO FINANCIAL STATEMENTS
FOR THE SIX MONTHS ENDED MARCH 31, 2005

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General – A division of The Scripps Research Institute ("TSRI") known as "Scripps Florida," was established in January 2004 with a $310 million grant from the State of Florida ("Florida"). For Florida, the grant facilitates the establishment and operation of a biomedical research institution for the purposes of enhancing education and research and promoting economic development and diversity. For TSRI, the grant provides a unique opportunity to enhance investigations relevant to current medical needs and human diseases by combining high through-put technologies (leading-edge automated systems that screen compound libraries against specific validated targets at very high speeds) with basic research. The facilities for Scripps Florida will be developed with a grant from the County of Palm Beach (the "County"), which has agreed to provide land and funding for the development of permanent facilities and to make temporary space available during such development. Limited operations began in March 2004 in the temporary space, which consists of approximately 8,000 square feet located in Boca Raton, Florida. In February 2005, TSRI relocated from the temporary space in Boca Raton to the temporary facilities constructed by the County on the Florida Atlantic University ("FAU") campus in Jupiter, Florida.

The State of Florida's Grant. Florida created the Scripps Florida Funding Corporation ("Florida Funding"), a nonprofit Florida corporation, to administer and disburse Florida's grant funds to TSRI for the benefit of the Scripps Florida division. Florida Funding will disburse grant funds to TSRI on an annual basis over the course of approximately seven years. TSRI's Business Plan for the Scripps Florida division provides for annual disbursements ranging from $20 million to $70 million. Florida Funding holds a security interest in certain equipment acquired with grant funds provided by Florida.

In order to receive the funds, TSRI must submit an annual funding request, together with various progress reports, and must maintain compliance with certain covenants and conditions. In addition, Scripps Florida must create a certain number of new jobs each year. Disbursement of Florida grant moneys is subject to the approval of a majority of the Florida Funding board of directors, and Florida Funding may reduce or eliminate funding in any year if TSRI has ceased operations in Florida or has failed to submit a written commitment to continue operations the following year. In addition, Florida Funding may reduce or eliminate grant funding in the year following the occurrence of certain events, including, among others, a knowing misrepresentation in the annual funding request, TSRI's declaration of bankruptcy, or the loss of TSRI's tax-exempt status.

TSRI's Business Plan provides for occupancy of the permanent Scripps Florida facilities in the third quarter of 2006. However, the Florida grant contains a force majeure provision that allows for a four-year extension of the Florida grant funding schedule if, due to certain enumerated events, TSRI is unable to occupy the permanent facilities as contemplated and, thus, is unable to achieve any required deadlines.

The County Grant. The grant from the County provides for both temporary and permanent facilities. The grant for the permanent facilities includes a 30-year land lease and provides funding for construction of the permanent facilities.

The Temporary Facilities. The County has committed $12 million for the construction of approximately 41,600 square feet of laboratory and laboratory support space on the FAU campus located in Jupiter, Florida. The grant is part of a separate agreement between the County and FAU. TSRI has no rent obligation but must reimburse FAU for certain services such as maintenance, security and utilities. If TSRI's tenancy continues beyond August 2006, TSRI must pay rent at the rate of $55,400 per month. However, if the permanent facilities are not completed by March 2008, TSRI must negotiate an extension of the lease or make other arrangements until the permanent facilities are ready for occupancy.

The Land Lease and the Permanent Facilities. As a condition to hosting the site of the Scripps Florida division, the County purchased approximately 1,900 acres known as the Mecca site ("Mecca") and agreed to lease 100 acres of that site to TSRI for 30 years. TSRI's lease payments will be $1 per year. The County grant provides $137 million for the construction of the permanent facilities on the 100 acres at Mecca. TSRI is responsible for the design and construction of the permanent facilities.

Pursuant to the County grant, TSRI also is obligated to create 545 new jobs by February 6, 2011 at salaries, on average, that exceed the average salaries in the County. If TSRI successfully creates such jobs, TSRI may continue to occupy the permanent facilities, and the County will continue the land lease until February 6, 2034. If the 545 jobs exist on February 6, 2011 and at the end of each subsequent year until February 6, 2034, title to the 100 acres at Mecca will transfer to TSRI. In the event that TSRI is unsuccessful in creating 545 new jobs by, February 6, 2014, which includes a three year cure period, title to the permanent facilities will revert to the County, and the land lease for the 100 acres at Mecca will terminate.

If TSRI fails to meet its contractual obligations to Florida Funding or the County, any unexpended grant funds and property purchased with grant funds will revert to Florida or the County, as appropriate. TSRI, however, will not be obligated to repay any previously expended grant funds, provided such expenditures were in accordance with the terms of the respective grant.

The ability of TSRI to meet its performance expectations under the State agreement depends, to some extent, upon its ability to occupy its permanent facility as contemplated by its Business Plan. Pending litigation and other matters involving the Mecca site will result in delays in completion of the permanent facility.

Revenue Recognition – Grant funds received from Florida Funding are classified as unrestricted revenue in the year of receipt. Unexpended grant funds are reported as increases in temporarily restricted net assets.

The estimated fair rental value of the County grant for use of temporary facilities applicable to future periods, is reported as prepaid rent and an increase in temporarily restricted net assets. The estimated fair value of the use of the temporary facilities in the current year is reflected as grant income and rent expense.

there has been no study or any attempt to obtain quotes from third parties to determine what the cost of obtaining such services from third parties would have been. The resulting inter-divisional payable is settled on a periodic basis.

Use of Estimates and Assumptions – Management uses estimates and assumptions in preparing financial statements in accordance with generally accepted accounting principles in the United States of America. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could vary from the estimates that were used.

Legal Matters – The Mecca site, which is the site agreed upon by the County and TSRI for construction of the Scripps Florida permanent facility, is presently facing legal challenges that have caused delays in the County's progress in delivering a buildable site to TSRI as agreed under the County grant. The legal challenges have been filed by coalitions of environmental groups concerned about urban sprawl and the environmental impact of building out Mecca. The challenges to date allege procedural improprieties on behalf of the County. TSRI has been named as a co-defendant in one such challenge based on the contractual relationship between TSRI and the County. Another complaint, filed in December 2004 by two residents of the County, alleges the County, TSRI and the State of Florida with a violation of the State of Florida's civil racketeering statute in connection with the County's acquisition and proposed development of the Mecca site for Scripps Florida's permanent facilities. TSRI believes that the complaints are without merit and is vigorously defending against the allegations at the appropriate time. Discovery is on-going, and both cases are currently set for trial in November 2005.

THE SCRIPPS RESEARCH INSTITUTE

BALANCE SHEET
AT DECEMBER 31
(In Thousands)

- UNAUDITED -

ASSETS	2004	2003
Current Assets:		
Cash and cash equivalents	$ 1,989	$ 3,427
Investments	165,612	141,463
Grants receivable and other	17,494	20,281
Total current assets	185,095	165,171
Property - net	174,451	166,640
Investments	92,100	85,252
Pension, prepaid rent and other	6,468	5,437
TOTAL ASSETS	$ 458,114	$ 422,500
LIABILITIES AND NET ASSETS		
Current Liabilities:		
Accounts payable and accrued expenses	$ 25,087	$ 25,857
Deferred revenue and other	8,499	14,100
Total current liabilities	33,586	39,957
Long-term debt	36,780	38,140
Deferred revenue and other	16,714	10,904
Total liabilities	87,080	89,001
Net Assets:		
Unrestricted	314,605	285,140
Temporarily restricted	25,142	17,145
Permanently restricted	31,287	31,214
Total net assets	371,034	333,499
TOTAL LIABILITIES AND NET ASSETS	$ 458,114	$ 422,500

See accompanying note to financial statements.

THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS
FOR THE THREE MONTHS ENDED DECEMBER 31
(In Thousands)

- UNAUDITED -

	2004	2003
CHANGES IN UNRESTRICTED NET ASSETS:		
Revenue:		
Grants and contracts	$ 64,208	$ 61,330
Other revenue and support	7,038	7,315
Investment income	17,070	14,798
Net assets released from restriction	9,192	13
Total revenue	97,508	83,456
Expenses:		
Research	66,024	62,913
Postgraduate and graduate education	4,442	4,569
Management and general	3,219	3,102
Other	1,097	984
Total expenses	74,782	71,568
Increase in unrestricted net assets	22,726	11,888
CHANGES IN TEMPORARILY RESTRICTED NET ASSETS:		
Other support and contributions	200	2,367
Investment income	873	949
Net assets released from restriction	(9,192)	(13)
(Decrease) increase in temporarily restricted net assets	(8,119)	3,303
CHANGES IN PERMANENTLY RESTRICTED NET ASSETS:		
Other support and contributions	13	1,635
Increase in permanently restricted net assets	13	1,635
INCREASE IN NET ASSETS	14,620	16,826
NET ASSETS AT BEGINNING OF YEAR	356,414	316,673
NET ASSETS AS OF DECEMBER 31	$ 371,034	$ 333,499

See accompanying note to financial statements.

THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF CASH FLOWS
FOR THE THREE MONTHS ENDED DECEMBER 31
(In Thousands)

- UNAUDITED -

	2004	2003
CASH FLOWS FROM OPERATING ACTIVITIES:		
Increase in net assets	$ 14,620	$ 16,826
Adjustments to reflect cash flows provided by operating activities:		
Depreciation and amortization	5,277	5,512
Realized and unrealized gains on investments	(16,283)	(14,445)
Endowment contributions and other non-cash transactions		(1,631)
Changes in assets and liabilities:		
Pension, prepaid rent, receivables and other	3,165	(1,658)
Accounts payable and accrued expenses	(9,178)	(4,284)
Deferred revenue and other	(1,300)	5,706
Net cash (used in) provided by operating activities	(3,699)	6,026
CASH FLOWS FROM INVESTING ACTIVITIES:		
Change in investments	16,815	(5,151)
Property additions	(12,909)	(2,241)
Net cash used in (provided by) investing activities	3,906	(7,392)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Endowment contributions		1,631
Net cash provided by financing activities		1,631
NET INCREASE IN CASH AND CASH EQUIVALENTS	207	265
BEGINNING CASH AND CASH EQUIVALENTS	1,782	3,162
ENDING CASH AND CASH EQUIVALENTS	$ 1,989	$ 3,427

See accompanying note to financial statements.

THE SCRIPPS RESEARCH INSTITUTE

NOTES TO FINANCIAL STATEMENTS
FOR THE THREE MONTHS ENDED DECEMBER 31, 2004

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General—The Scripps Research Institute ("TSRI") conducts biomedical research funded primarily with grants from agencies of the United States government. TSRI is a California not-for-profit public benefit corporation, exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. The financial statements reflect all adjustments and estimates necessary for the fair presentation of financial position and results of operations in accordance with accounting principles generally accepted in the United States of America.

Funding—Grants and contracts revenue generally is recognized as unrestricted revenue when the research expenses are incurred. Unspent grant funds from federal and other grantors received in advance of the related expenditure are reported as deferred revenue.

Temporarily restricted net assets result from contributions designated by donors for use in future periods, generally for specific research projects. Temporarily restricted net assets are reported as unrestricted net assets released from restrictions when the restrictions of the gift have been satisfied. Restricted contributions whose restrictions are met in the same reporting period are reported as unrestricted support. Permanently restricted net assets include donor-restricted gifts and bequests for permanent endowment. Investment income from permanently restricted net assets supports research and other projects. Unconditional pledges are recorded at their estimated present value reduced by an allowance for uncollectible amounts. Gifts of cash for the acquisition of property are reported as net assets released from restriction when the property is placed in service.

TSRI is a party to various arrangements that generally provide for the licensing of technology in exchange for research funding, royalties, or ownership participation.

Scripps Florida was established in January 2004 as an operating division of TSRI. Scripps Florida combines high throughput technologies with research programs relevant to current medical needs in human diseases. Funding will be provided by a $310 million grant from the State of Florida to be disbursed over a seven-year period in annual amounts ranging from $20 million to $70 million conditioned on compliance with certain covenants and conditions. Expended grant funds from the State of Florida are reflected as unrestricted revenue. Billed but unspent grant funds from the State of Florida are reflected as temporarily restricted net assets until spent.

The County of Palm Beach agreed to provide temporary space, land and $137 million in funding for the development of Scripps Florida's permanent facility. Continued use of the land and permanent facility are conditional, primarily depending upon job creation requirements of the grant. The estimated fair rental value of the use of temporary facilities applicable to future periods is reported as prepaid rent and an increase in temporarily restricted net assets. The grant for the construction of permanent facilities is recorded as construction in process (or property, upon completion) and deferred revenue as costs are

incurred. Depreciation will commence upon occupancy and a like amount of grant revenue will be recorded. The remaining balance in the deferred revenue account will be recognized as grant revenue over time, depending on the resolution of certain circumstances and conditions for continued use of the facility. When certain contingencies regarding the County's provision of the land are resolved, the grant for the use of the land will be reported as prepaid rent at estimated fair value and associated deferred revenue. Prepaid rent will be amortized over thirty years commencing with occupancy. Deferred revenue related to the land will be recognized over time depending on the resolution of certain circumstances and conditions for continued use.

Cash and Cash Equivalents—Liquid investments, which fund the daily operating activities of TSRI and have a maturity of three months or less at time of purchase, are reported as cash and cash equivalents.

Investments—Investments are carried at fair value that is generally determined by quoted market prices provided by independent outside valuation services. Current investments include unrestricted and temporarily restricted investments that are available for expenditure within one year. Long-term investments include permanently restricted investments plus the related capital gains and losses and temporarily restricted investments that are available for expenditure beyond one year.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

BALANCE SHEET
AS OF DECEMBER 31
(In Thousands)

- UNAUDITED -

ASSETS	2004
Current Assets:	
Cash and cash equivalents	$ 146
Investments	6,361
State and County grants receivable	1,435
Prepaid rent, other and pledges receivable - net	171
Total current assets	8,113
Property - net	13,916
Prepaid rent	832
Pledges receivable - net	632
TOTAL ASSETS	$ 23,493
LIABILITIES AND NET ASSETS	
Current Liabilities:	
Accounts payable and accrued expenses	$ 554
Interdivisional payable	78
Total current liabilities	632
Deferred revenue	5,980
Total liabilities	6,612
Net Assets:	
Unrestricted	7,996
Temporarily restricted	8,885
Total net assets	16,881
TOTAL LIABILITIES AND NET ASSETS	$ 23,493

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF ACTIVITIES AND CHANGES IN NET ASSETS
FOR THE THREE MONTHS ENDED DECEMBER 31
(In Thousands)

- UNAUDITED -

	2004
CHANGES IN UNRESTRICTED NET ASSETS:	
Revenue:	
Net assets released from restriction - State and County grants	$ 8,777
Other revenue and support	165
Investment income	155
Total revenue	9,097
Expenses:	
Research	2,104
Management and general	407
Fund raising	166
Total expenses	2,677
Increase in unrestricted net assets	6,420
CHANGES IN TEMPORARILY RESTRICTED NET ASSETS:	
Net assets released from restriction - State and County grants	(8,777)
Other support and contributions	202
Decrease in temporarily restricted net assets	(8,575)
DECREASE IN NET ASSETS	(2,155)
NET ASSETS AT BEGINNING OF YEAR	19,036
NET ASSETS AS OF DECEMBER 31	$ 16,881

See accompanying note to financial statements.

SCRIPPS FLORIDA
A DIVISION OF
THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF CASH FLOWS
FOR THE THREE MONTHS ENDED DECEMBER 31
(In Thousands)

- UNAUDITED -

	2004
CASH FLOWS FROM OPERATING ACTIVITIES:	
Decrease in net assets	$ (2,155)
Adjustments to reflect cash flows provided by operating activities:	
Depreciation and amortization	60
Realized and unrealized gains on investments	(9)
Changes in assets and liabilities:	
Grants, prepaid rent, other and pledges receivable - net	7,795
Accounts payable and accrued expenses	(3,141)
Deferred revenue	1,569
Net cash provided by operating activities	4,119
CASH FLOWS FROM INVESTING ACTIVITIES:	
Change in investments	3,715
Property additions	(7,928)
Net cash used in investing activities	(4,213)
NET DECREASE IN CASH AND CASH EQUIVALENTS	(94)
BEGINNING CASH AND CASH EQUIVALENTS	240
ENDING CASH AND CASH EQUIVALENTS	$ 146

See accompanying note to financial statements.

SCRIPPS FLORIDA –
A Division of The Scripps Research Institute

NOTES TO FINANCIAL STATEMENTS
FOR THE QUARTER ENDED DECEMBER 31, 2004

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General – A division of The Scripps Research Institute ("TSRI") known as "Scripps Florida," was established in January 2004 with a $310 million grant from the State of Florida ("Florida"). For Florida, the grant facilitates the establishment and operation of a biomedical research institution for the purposes of enhancing education and research and promoting economic development and diversity. For TSRI, the grant provides a unique opportunity to enhance investigations relevant to current medical needs and human diseases by combining high through-put technologies (leading-edge automated systems that screen compound libraries against specific validated targets at very high speeds) with basic research. The facilities for Scripps Florida will be developed with a grant from the County of Palm Beach (the "County"), which has agreed to provide land and funding for the development of permanent facilities and to make temporary space available during such development. Limited operations began in March 2004 in the temporary space, which consists of approximately 8,000 square feet located in Boca Raton, Florida. In January 2005, TSRI began relocating from the temporary space in Boca Raton to the temporary facilities constructed by the County on the Florida Atlantic University ("FAU") campus in Jupiter, Florida. This transition will be phased over time, and TSRI expects the relocation process to be complete in February 2005.

The State of Florida's Grant. Florida created the Scripps Florida Funding Corporation ("Florida Funding"), a nonprofit Florida corporation, to administer and disburse Florida's grant funds to TSRI for the benefit of the Scripps Florida division. Florida Funding will disburse grant funds to TSRI on an annual basis over the course of approximately seven years. TSRI's Business Plan for the Scripps Florida division provides for annual disbursements ranging from $20 million to $70 million. Florida Funding holds a security interest in certain equipment acquired with grant funds provided by Florida.

In order to receive the funds, TSRI must submit an annual funding request, together with various progress reports, and must maintain compliance with certain covenants and conditions. In addition, Scripps Florida must create a certain number of new jobs each year. Disbursement of Florida grant moneys is subject to the approval of a majority of the Florida Funding board of directors, and Florida Funding may reduce or eliminate funding in any year if TSRI has ceased operations in Florida or has failed to submit a written commitment to continue operations the following year. In addition, Florida Funding may reduce or eliminate grant funding in the year following the occurrence of certain events, including, among others, a knowing misrepresentation in the annual funding request, TSRI's declaration of bankruptcy, or the loss of TSRI's tax-exempt status.

TSRI's Business Plan provides for occupancy of the permanent Scripps Florida facilities in the third quarter of 2006. However, the Florida grant contains a force majeure provision that allows for a four-year extension of the Florida grant funding schedule if, due to certain enumerated events, TSRI is unable to occupy the permanent facilities as contemplated and, thus, is unable to achieve any required deadlines.

The County Grant. The grant from the County provides for both temporary and permanent facilities. The grant for the permanent facilities includes a 30-year land lease and provides funding for construction of the permanent facilities.

The Temporary Facilities. The County has committed $12 million for the construction of approximately 41,600 square feet of laboratory and laboratory support space on the FAU campus located in Jupiter, Florida. The grant is part of a separate agreement between the County and FAU. TSRI has no rent obligation but must reimburse FAU for certain services such as maintenance, security and utilities. If TSRI's tenancy continues beyond August 2006, TSRI must pay rent at the rate of $55,400 per month. However, if the permanent facilities are not completed by March 2008, TSRI must negotiate an extension of the lease or make other arrangements until the permanent facilities are ready for occupancy.

The Land Lease and the Permanent Facilities. As a condition to hosting the site of the Scripps Florida division, the County purchased approximately 1,900 acres known as the Mecca site ("Mecca") and agreed to lease 100 acres of that site to TSRI for 30 years. TSRI's lease payments will be $1 per year. The County grant provides $137 million for the construction of the permanent facilities on the 100 acres at Mecca. TSRI is responsible for the design and construction of the permanent facilities.

Pursuant to the County grant, TSRI also is obligated to create 545 new jobs by February 6, 2011 at salaries, on average, that exceed the average salaries in the County. If TSRI successfully creates such jobs, TSRI may continue to occupy the permanent facilities, and the County will continue the land lease until February 6, 2034. If the 545 jobs exist on February 6, 2011 and at the end of each subsequent year until February 6, 2034, title to the 100 acres at Mecca will transfer to TSRI. In the event that TSRI is unsuccessful in creating 545 new jobs by, February 6, 2014, which includes a three year cure period, title to the permanent facilities will revert to the County, and the land lease for the 100 acres at Mecca will terminate.

If TSRI fails to meet its contractual obligations to Florida Funding or the County, any unexpended grant funds and property purchased with grant funds will revert to Florida or the County, as appropriate. TSRI, however, will not be obligated to repay any previously expended grant funds, provided such expenditures were in accordance with the terms of the respective grant.

The ability of TSRI to meet its performance expectations under the State agreement depends, to some extent, upon its ability to occupy its permanent facility as contemplated by its Business Plan. The County has invoked the force majeure clause in the County grant, and did not deliver a buildable site to TSRI on Mecca in January 2005. In addition, the County Commission voted in December 2004 not to permit or fund construction on the Mecca site because of pending litigation. Thus, actual and other anticipated litigation and other matters involving the Mecca site may result in delays in completion of the permanent facility.

Revenue Recognition – Grant funds received from Florida Funding are classified as unrestricted revenue in the year of receipt. Unexpended grant funds are reported as increases in temporarily restricted net assets.

The estimated fair rental value of the County grant for use of temporary facilities applicable to future periods, is reported as prepaid rent and an increase in temporarily restricted net assets. The estimated fair value of the use of the temporary facilities in the current year is reflected as grant income and rent expense.

Challenges to development of the Mecca site have been made, and these challenges may delay TSRI's ability to construct and occupy the permanent facilities as originally anticipated. The extent of such delay and the amount of potential cost overruns, if any, are not known at this time. Due to these challenges and other uncertainties, the County grant funds received for the construction of permanent facilities are recorded as construction in process (or property, upon completion) and deferred revenue. Depreciation will commence upon occupancy and a like amount of grant revenue will be recorded. At the appropriate time when fewer uncertainties exist, the remaining balance in the deferred revenue account will be recognized as temporarily restricted grant revenue and released to unrestricted operations ratably, over the remaining life of the County grant.

Other temporarily restricted net assets result from contributions designated by donors for use in future periods, or for specific research projects and are reported as increases in temporarily restricted net assets. Restricted contributions whose restrictions are met in the same reporting period are reported as unrestricted support. Temporarily restricted net assets are reported as unrestricted net assets released from restrictions when the restrictions have been satisfied.

Cash and Cash Equivalents — Liquid investments, which fund the daily operating activities of Scripps Florida and have a maturity of three months or less, are reported as cash and cash equivalents.

Investments — Investments are carried at fair value, which is generally determined by quoted market prices provided by independent outside valuation services. Current investments include unrestricted and temporarily restricted investments, which are available for expenditure within one year.

Pledges Receivable – Pledges receivable are recorded at full value and discounted at a rate that reflects the risk involved. A provision for uncollectible accounts is calculated based on specific identification of receivables for which collection is uncertain.

Property & other assets — Fixed and other assets with a cost of more than $3,500 are capitalized and depreciated over their estimated useful lives. Fixed and other assets with a cost of between $3,500 and $50,000 are depreciated or amortized in the fiscal year following acquisition. For acquisitions of more than $50,000 but less than $1 million, a full year of depreciation or amortization is reported if the asset was acquired in the first six months of any fiscal year. Depreciation or amortization commences in the following fiscal year for acquisitions of more than $50,000 but less than $1 million acquired in the second six months of any fiscal year. Depreciation and amortization for assets with an acquisition cost of more than $1 million commences when the asset is placed in service.

Transactions with The Scripps Research Institute — As a division of TSRI, the accompanying financial statements may not be representative of the financial condition and results of operations that would have occurred if Scripps Florida had been operated as an independent entity.

The cost of the services that are allocated to Scripps Florida are based on actual direct costs incurred or on TSRI's estimate of expenses relative to the services provided. However, there has been no study or any attempt to obtain quotes from third parties to determine what the cost of obtaining such services from third parties would have been. The resulting inter-divisional payable is settled on a periodic basis.

Use of Estimates and Assumptions – Management uses estimates and assumptions in preparing financial statements in accordance with generally accepted accounting principles in the United States of America. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could vary from the estimates that were used.

Legal Matters – The Mecca site, which is the site agreed upon by the County and TSRI for construction of the Scripps Florida permanent facility, is presently facing legal challenges that have caused delays in the County's progress in delivering a buildable site to TSRI as agreed under the County grant. The legal challenges have been filed by coalitions of environmental groups concerned about the environmental impact of building out Mecca. The challenges to date allege procedural improprieties on behalf of the County. TSRI has been named as a co-defendant in one such challenge based on the contractual relationship between TSRI and the County. Another complaint, filed in December 2004 by two residents of the County, alleges the County, TSRI and the State of Florida with a violation of the State of Florida's civil racketeering statute in connection with the County's acquisition and proposed development of the Mecca site for Scripps Florida's permanent facilities. TSRI believes that the complaints are without merit and will, if required, vigorously defend against the allegations at the appropriate time.

The Scripps Research Institute

Financial Statements for the Years Ended September 30, 2004 and 2003, Supplemental Information for the Year Ended September 30, 2004 and Independent Auditors' Report

THE SCRIPPS RESEARCH INSTITUTE

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THE SCRIPPS RESEARCH INSTITUTE

Management's Statement on Responsibility for Accounting and Financial Reporting

Management has the primary responsibility for the preparation of the financial statements and for ascertaining that the financial statements and other information fairly reflect the financial position and results of operations of The Scripps Research Institute.

The financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and necessarily include amounts that are based on best estimates and judgments with appropriate consideration given to materiality. Management has made these estimates and judgments based on extensive experience and a substantive understanding of the underlying events and transactions.

In fulfilling its responsibility for the reliability and integrity of financial information, management has established and maintains accounting procedures and related control systems. Management believes that these systems and controls provide reasonable assurance that assets are safeguarded, that transactions are executed in accordance with management's authorizations and properly recorded to permit the preparation of reliable financial statements in conformity with accounting principles generally accepted in the United States of America, and that material errors or irregularities are either prevented or detected within a timely period by employees in the normal course of performing their assigned duties. The Scripps Research Institute's independent auditors review and test the established internal control systems to the extent necessary to express an opinion on the financial statements.

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INDEPENDENT AUDITORS' REPORT

Board of Trustees of
The Scripps Research Institute

We have audited the accompanying balance sheet of The Scripps Research Institute ("TSRI") as of September 30, 2004 and 2003 and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of TSRI's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of The Scripps Research Institute as of September 30, 2004 and 2003 and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Deloitte & Touche LLP

December 28, 2004

THE SCRIPPS RESEARCH INSTITUTE

BALANCE SHEET
SEPTEMBER 30, 2004 AND 2003 (In thousands)

ASSETS	2004	2003
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,782	$ 3,162
Investments	171,487	128,215
Grants receivable and other	20,270	19,897
Total current assets	193,539	151,274
Property - net	166,819	169,911
Investments	86,757	78,903
Pension, prepaid rent and other	6,858	4,164
TOTAL	$453,973	$404,252
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	$ 34,266	$ 30,140
Deferred revenue and other	11,610	7,271
Total current liabilities	45,876	37,411
Long-term debt	36,780	38,140
Deferred revenue and other	14,903	12,028
Total liabilities	97,559	87,579
NET ASSETS:		
Unrestricted	291,879	273,252
Temporarily restricted	33,261	13,842
Permanently restricted	31,274	29,579
Total net assets	356,414	316,673
TOTAL	$453,973	$404,252

See accompanying notes to financial statements.

THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF ACTIVITIES
YEARS ENDED SEPTEMBER 30, 2004 and 2003 (In thousands)

	2004	2003
CHANGES IN UNRESTRICTED NET ASSETS:		
Revenue:		
Grants and contracts	$265,271	$242,449
Other revenue and support	31,719	27,511
Investment income	28,089	34,523
Net assets released from restrictions	1,458	1,783
Total revenue	326,537	306,266
Expenses:		
Research	272,353	251,242
Postgraduate and graduate education	17,633	16,339
Management and general	14,234	11,045
Other	3,690	3,182
Total expenses	307,910	281,808
Increase in unrestricted net assets	18,627	24,458
CHANGES IN TEMPORARILY RESTRICTED NET ASSETS:		
Grants	14,433	
Other support and contributions	4,926	317
Investment income	1,518	1,516
Net assets released from restrictions	(1,458)	(1,783)
Increase in temporarily restricted net assets	19,419	50
CHANGES IN PERMANENTLY RESTRICTED NET ASSETS		
Other support and contributions	1,695	644
Increase in permanently restricted net assets	1,695	644
INCREASE IN NET ASSETS	39,741	25,152
NET ASSETS—Beginning of year	316,673	291,521
NET ASSETS—End of year	$356,414	$316,673

See accompanying notes to financial statements.

THE SCRIPPS RESEARCH INSTITUTE

STATEMENT OF CASH FLOWS
YEARS ENDED SEPTEMBER 30, 2004 AND 2003 (In thousands)

	2004	2003
CASH FLOWS FROM OPERATING ACTIVITIES:		
Increase in net assets	$ 39,741	$ 25,152
Adjustments to reflect cash flows provided by operating activities:		
Depreciation and amortization	22,360	22,243
Realized and unrealized gains on investments	(25,939)	(32,251)
Endowment contributions and other non-cash transactions	(1,633)	(1,449)
Changes in assets and liabilities:		
Pension, prepaid rent, receivables, and other	(3,067)	(3,635)
Accounts payable and accrued expenses	4,056	524
Deferred revenue and other	7,214	(774)
Net cash provided by operating activities	42,732	9,810
CASH FLOWS FROM INVESTING ACTIVITIES:		
Change in investments	(25,187)	5,718
Property additions	(19,268)	(15,177)
Net cash used in investing activities	(44,455)	(9,459)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payments on long-term debt	(1,290)	(1,225)
Contributions restricted for endowment	1,633	532
Net cash provided by (used in) financing activities	343	(693)
NET DECREASE IN CASH AND CASH EQUIVALENTS	(1,380)	(342)
BEGINNING CASH AND CASH EQUIVALENTS	3,162	3,504
ENDING CASH AND CASH EQUIVALENTS	$ 1,782	$ 3,162

See accompanying notes to financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General—The Scripps Research Institute ("TSRI") conducts biomedical research funded primarily with grants from agencies of the United States government. TSRI is a California not-for-profit public benefit corporation, exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. The financial statements reflect all adjustments and estimates necessary for the fair presentation of financial position and results of operations in accordance with accounting principles generally accepted in the United States of America.

Funding— Grants and contracts revenue generally is recognized as unrestricted revenue when the research expenses are incurred. Unspent grant funds from federal and other grantors received in advance of the related expenditure are reported as deferred revenue.

Temporarily restricted net assets result from contributions designated by donors for use in future periods, generally for specific research projects. Temporarily restricted net assets are reported as unrestricted net assets released from restrictions when the restrictions of the gift have been satisfied. Restricted contributions whose restrictions are met in the same reporting period are reported as unrestricted support. Permanently restricted net assets include donor-restricted gifts and bequests for permanent endowment. Investment income from permanently restricted net assets supports research and other projects. Unconditional pledges are recorded at their estimated present value reduced by an allowance for uncollectible amounts. Gifts of cash for the acquisition of property are reported as net assets released from restriction when the property is placed in service.

TSRI is a party to various arrangements that generally provide for the licensing of technology in exchange for research funding, royalties, or ownership participation.

Scripps Florida was established in January 2004 as an operating division of TSRI. Scripps Florida combines high throughput technologies with research programs relevant to current medical needs in human diseases. Funding will be provided by a $310 million grant from the State of Florida to be disbursed over a seven-year period in annual amounts ranging from $20 million to $70 million conditioned on compliance with certain covenants and conditions. Expended grant funds from the State of Florida are reflected as unrestricted revenue. Billed but unspent grant funds from the State of Florida are reflected as temporarily restricted net assets until spent.

The County of Palm Beach agreed to provide temporary space, land and $137 million in funding for the development of Scripps Florida's permanent facility. Continued use of the land and permanent facility are conditional, primarily depending upon job creation requirements of the grant. The estimated fair rental value of the use of temporary facilities applicable to future periods is reported as prepaid rent and an increase in temporarily restricted net assets. The grant for the construction of permanent facilities is recorded as construction in process (or property, upon completion) and deferred revenue as costs are incurred. Depreciation will commence upon occupancy and a like amount of grant revenue will be recorded. The remaining balance in the deferred revenue account will be recognized as grant revenue over time, depending on the resolution of certain circumstances and conditions for continued use of the facility. When certain contingencies regarding the County's provision of the land are resolved, the grant

for the use of the land will be reported as prepaid rent at estimated fair value and associated deferred revenue. Prepaid rent will be amortized over thirty years commencing with occupancy. Deferred revenue related to the land will be recognized over time depending on the resolution of certain circumstances and conditions for continued use.

Cash and Cash Equivalents—Liquid investments, which fund the daily operating activities of TSRI and have a maturity of three months or less at the time of purchase, are reported as cash and cash equivalents.

Investments—Investments are carried at fair value that is generally determined by quoted market prices provided by independent outside valuation services. Current investments include unrestricted and temporarily restricted investments that are available for expenditure within one year. Long-term investments include permanently restricted investments plus the related capital gains and losses and temporarily restricted investments that are available for expenditure beyond one year.

2. INVESTMENTS

Investments at fair value (in thousands of dollars) as of September 30 are summarized as follows:

	2004	2003
Cash and short-term investment funds with maturities of three months to one year	$ 15,000	$ 4,283
Domestic and foreign equities including convertible securites and real estate investment trusts	145,516	125,526
Government, mortgage and corporate debt	78,507	58,731
Alternative strategies including multi-strategy hedge funds, private equity and other limited partnership interests	19,221	18,578
Total	$258,244	$207,118

Investments with a fair value of $ 4,923,000 and $4,724,000 at September 30, 2004 and 2003, respectively, have been received under annuity and unitrust agreements, which require annual payments from the trust to the beneficiaries during their lifetimes. Upon the death of the beneficiaries, substantially all of the remaining assets are available for general purposes. The liability to such beneficiaries of $1,812,000 and $1,660,000 at September 30, 2004 and 2003, respectively, is based on life expectancies and the annual payment required, discounted at the risk-free interest rate.

TSRI's portfolio is managed by independent professional investment managers. Certain of these managers are authorized to invest a limited portion of TSRI's portfolio in derivative instruments to increase portfolio diversification and return and reduce volatility.

The composition of investment return (in thousands of dollars) includes the following for the years ended September 30:

	2004	2003
Interest and dividends:		
Unrestricted	$ 3,493	$ 3,574
Temporarily restricted	175	214
Net gains:		
Unrestricted	24,596	30,949
Temporarily restricted	1,343	1,302
Investment return	$29,607	$36,039

3. PROPERTY

Property is carried at cost and depreciation is recorded using the straight-line method over the estimated useful lives of the assets. Property (in thousands of dollars) at September 30 is summarized as follows:

	2004	2003
Land	$ 14,525	$ 14,525
Buildings	154,430	151,764
Equipment	132,938	123,500
Construction in process	3,118	
Leasehold improvements and other assets	19,891	19,421
	324,902	309,210
Less accumulated depreciation and amortization	(158,083)	(139,299)
Total	$ 166,819	$ 169,911

In July 2004, TSRI entered into a purchase agreement to acquire land and a building that is currently the subject of a lease. Escrow is expected to close on this $32 million acquisition in March 2005. Taxable and tax-exempt debt of approximately $24 million is expected to be issued for this acquisition. The remainder of the acquisition price is expected to be provided by contributions raised for this purpose and by other internal resources.

4. LONG-TERM DEBT

In 1994, TSRI borrowed $30 million through the issuance of tax-exempt serial and term bonds sponsored by the California Health Facilities Financing Authority under a Master Indenture of Trust. The bonds are collateralized by a pledge of revenues and the Indenture places limits on the incurrence of additional indebtedness. Principal is due in varying annual installments through 2018. Interest is payable on a semi-annual basis, at rates ranging from 6.0% to 6.625%.

In 2000, TSRI borrowed $16 million through the issuance of tax-exempt serial and term bonds sponsored by the California Infrastructure and Economic Development Bank under the 1994 Master Indenture of Trust. The bonds are collateralized by a pledge of revenues. Principal is due in varying annual installments through 2030. Interest is payable on a semi-annual basis, at rates ranging from 4.6% to 5.75%.

Interest paid in 2004 and 2003 on long-term debt was $2,407,000 and $2,473,000 respectively.

The estimated fair value of the tax-exempt bonds at September 30, 2004 was $40,370,000.

Scheduled principal repayments on long-term debt (in thousands of dollars) are as follows for the years ending September 30, 2004:

2005	$ 1,360
2006	1,435
2007	1,520
2008	1,610
2009	1,705
Thereafter	30,510
	$38,140

TSRI expects to execute a financing plan in March 2005 totaling approximately $48 million, of which $24 million will be used to refinance the 1994 bonds and $24 million will be used for the acquisition of the land and buildings discussed in Note 3. The new debt is expected to include $16 million in tax exempt and $8 million in taxable bonds.

5. RETIREMENT PLANS

Defined Contribution Plan—TSRI provides a non-contributory Money Purchase Plan for scientific staff and management. Contributions under this plan, determined as a percentage of participant salary, totaled $6,544,000 for the year ended September 30, 2004 and $6,033,000 for the year ended September 30, 2003.

Defined Benefit Plan—TSRI employees not covered by the defined contribution plan are covered by a defined benefit plan (the "Plan"). Pension benefits under the plan are based on specified benefit amounts and years of service. TSRI makes contributions to an independent trust to meet the funding requirement for this plan. Effective January 1, 2000, the plan incorporated a special minimum benefit based on average annual pay previously available only to those employees age 50 on January 1, 1996 and to provide a 50% additional match in the form of a pay based credit in the defined benefit plan up to 3% of pay. TSRI funds the pension liability at an amount equal to the net periodic pension expense.

A summary of the changes in the benefit obligations and plan assets at September 30 is presented below (in thousands of dollars):

	2004	2003
Change in prepaid benefit cost:		
Prepaid benefit cost at fiscal year beginning	$ 2,338	$ 2,338
Net periodic (cost) for fiscal year	(2,389)	(1,598)
Employer contributions paid during fiscal year	2,389	1,598
Prepaid benefit cost at fiscal year end	$ 2,338	$ 2,338
Change in projected benefit obligation:		
PBO at prior measurement date	$31,401	$25,683
Service cost	2,887	2,500
Interest cost	1,771	1,687
Actuarial loss	1,043	2,287
Benefits paid	(1,184)	(1,451)
Administrative expenses paid	(173)	(264)
Plan change		959
PBO at current measurement date	$35,745	$31,401
Change in plan assets:		
Fair value of assets at prior measurement date	$25,946	$25,384
Actual return on assets	5,425	679
Employer contributions	2,389	1,598
Benefits paid	(1,184)	(1,451)
Administrative expenses paid	(173)	(264)
Fair value of assets at current measurement date	$32,403	$25,946

The reconciliation of funded status is as follows at September 30, (in thousands of dollars):

	2004	2003
Accumulated benefit obligation	$ (29,843)	$ (24,877)
Projected benefit obligation	$ (35,745)	$ (31,401)
Fair value of assets	32,403	25,946
Funded status	(3,342)	(5,455)
Unrecognized prior service cost	1,768	1,893
Unrecognized net loss	3,912	5,900
Prepaid benefit cost	$ 2,338	$ 2,338

Assumptions used to determine the projected benefit obligation for the years ended September 30, are as follows:

	2004	2003
Discount rate	6.25%	6.00%
Compensation increase rate	4.50%	4.50%
Measurement date	June 30, 2004	June 30, 2003
Census date	July 1, 2004	July 1, 2003

Assumptions used to determine expense for the years ended September 30, are as follows:

	2004	2003
Discount rate	6.00%	7.00%
Long-term rate of return on assets	7.70%	8.25%
Compensation increase rate	4.50%	5.00%

Expected benefit payments are as follows as of September 30, 2004 (in thousands of dollars):

2005	$ 3,941
2006	2,754
2007	2,943
2008	3,677
2009	3,853
Thereafter through 2014	21,662

The Plan's assets by category are as follows as of September 30:

	2004		2003	
	Target	Actual	Target	Actual
Foreign and domestic equity securities	67%	67%	67%	69%
Government, mortgage and corporate debt instruments	15	14	15	14
Real estate investment trusts	8	8	8	8
Absolute return strategies	10	11	10	9
	100%	100%	100%	100%

The Investment Committee of the Board of Trustees is responsible for the safety of the invested principal of the Plan through (i) the identification, adoption and maintenance of an appropriate asset allocation that provides a target for the asset class within a minimum and maximum range (ii) the identification, adoption and maintenance of appropriate investment guidelines, policies and procedures and (iii) performance monitoring of portfolio managers against expectations as set forth in the investment guidelines. The policies are intended to provide for safety of principal through diversification in portfolios of domestic and international common stocks, bonds, limited partnerships, mutual funds and cash equivalents at returns consistent with the risk levels established by the Board. The equity portion of the portfolio is diversified within asset classes by economic sector, industry, quality and size and advised by managers who have distinct investment styles. The allocation to absolute return strategies is invested in a multi-strategy, "fund-of-funds" hedge fund limited partnership. Professional investment advisors manage Plan investments.

An independent investment consultant recommends alternative diversification models, provides professional performance evaluation, identifies potential investment managers and estimates the long-term rate of return for the asset allocation in place. The return is based on weighted average capital market assumptions including historical returns and the standard deviation and correlation of those historical returns, adjusted to anticipate the effects of inflation and economic market conditions for each asset class in the Plan.

Plan assets include securities whose values are subject to fluctuations in the securities market. Changes in the fair value of these assets attributable to differences between actual and assumed returns are deferred as unrecognized gains or losses and included in the determination of net pension expense over time. Fair value is determined by quoted market prices for the same or similar instruments.

6. COMMITMENTS AND CONTINGENCIES

Long-term Leases—TSRI has entered into non-cancelable operating lease agreements for buildings and equipment, expiring on various dates through 2019. Approximate minimum future rental payments required by these leases are summarized as follows (in thousands of dollars) for the years ending September 30:

2005	$ 20,923
2006	19,673
2007	16,820
2008	17,232
2009	17,309
Thereafter	111,819
Total	$203,776

Rental expense for operating leases totaled $21,641,000 and $21,986,000 for the years ended September 30, 2004 and 2003, respectively.

Contingencies—TSRI is a party to certain legal and other actions arising in the ordinary course of business. While it is not possible to predict or determine the outcome of these actions, it is the opinion of management that the liabilities, if any, under these claims are adequately covered by insurance or will not be significant to the financial statements.

* * * * * *

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INDEPENDENT AUDITORS' REPORT ON SUPPLEMENTAL COMBINING INFORMATION

Board of Trustees of
The Scripps Research Institute

We have audited the financial statements of The Scripps Research Institute ("TSRI") for the year ended September 30, 2004, and our report thereon appears on page 2. Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental combining information listed in the table of contents is presented for the purpose of additional analysis, rather than to present the financial position, changes in net assets, and cash flows of the individual divisions of TSRI, and is not a required part of the basic financial statements. This supplemental combining information is the responsibility of TSRI's management. Such information has been subjected to the auditing procedures applied in our audit of the basic 2004 financial statements and, in our opinion, is fairly stated in all material respects when considered in relation to the basic 2004 financial statements taken as a whole.

Deloitte & Touche LLP

December 28, 2004

THE SCRIPPS RESEARCH INSTITUTE

SUPPLEMENTAL COMBINING BALANCE SHEET INFORMATION
SEPTEMBER 30, 2004 (In thousands)

ASSETS	Florida	California	Total
CURRENT ASSETS:			
Cash and cash equivalents	$ 240	$ 1,542	$ 1,782
Investments	10,067	161,420	171,487
Grants receivable and other	7,730	12,540	20,270
Total current assets	18,037	175,502	193,539
Property—net	4,805	162,014	166,819
Investments		86,757	86,757
Pension, prepaid rent and other	1,842	5,016	6,858
TOTAL	$24,684	$429,289	$453,973
LIABILITIES AND NET ASSETS			
CURRENT LIABILITIES:			
Accounts payable and accrued expenses	$ 1,972	$ 32,294	$ 34,266
Interdivisional payable (receivable)	458	(458)	
Deferred revenue and other		11,610	11,610
Total current liabilities	2,430	43,446	45,876
Long-term debt		36,780	36,780
Deferred revenue and other	3,118	11,785	14,903
Total liabilities	5,548	92,011	97,559
NET ASSETS:			
Unrestricted	1,626	290,253	291,879
Temporarily restricted	17,510	15,751	33,261
Permanently restricted		31,274	31,274
Total net assets	19,136	337,278	356,414
TOTAL	$24,684	$429,289	$453,973

THE SCRIPPS RESEARCH INSTITUTE

SUPPLEMENTAL COMBINING STATEMENT OF ACTIVITIES INFORMATION
YEAR ENDED SEPTEMBER 30, 2004 (In thousands)

	Florida	California	Total
CHANGES IN UNRESTRICTED NET ASSETS:			
Revenue:			
Grants and contracts	$ 6,367	$258,904	$265,271
Other revenue and support	258	31,461	31,719
Investment income	160	27,929	28,089
Net assets released from restrictions		1,458	1,458
Total revenue	6,785	319,752	326,537
Expenses:			
Research	2,774	269,579	272,353
Postgraduate and graduate education		17,633	17,633
Management and general	1,959	12,275	14,234
Other	426	3,264	3,690
Total expenses	5,159	302,751	307,910
Increase in unrestricted net assets	1,626	17,001	18,627
CHANGES IN TEMPORARILY RESTRICED NET ASSETS:			
Grants	14,433		14,433
Other support and contributions	3,070	1,856	4,926
Investment income	7	1,511	1,518
Net assets released from restrictions		(1,458)	(1,458)
Increase in temporarily restricted net assets	17,510	1,909	19,419
CHANGES IN PERMANENTLY RESTRICTED NET ASSETS:			
Other support and contributions		1,695	1,695
Increase in permanently restricted net assets	-	1,695	1,695
INCREASE IN NET ASSETS	19,136	20,605	39,741
NET ASSETS—Beginning of year		316,673	316,673
NET ASSETS—End of year	$19,136	$337,278	$356,414

THE SCRIPPS RESEARCH INSTITUTE

SUPPLEMENTAL COMBINING STATEMENT OF CASH FLOWS INFORMATION
YEAR ENDED SEPTEMBER 30, 2004 (In thousands)

	Florida	California	Total
CASH FLOWS FROM OPERATING ACTIVITIES:			
Increase in net assets	$ 19,136	$ 20,605	$ 39,741
Adjustments to reflect cash flows provided by operating activities:			
Depreciation and amortization		22,360	22,360
Realized and unrealized gains on investments	(7)	(25,932)	(25,939)
Endowment contributions and other non-cash transactions		(1,633)	(1,633)
Changes in assets and liabilities:			
Pension, prepaid rent, receivables, and other	(9,572)	6,505	(3,067)
Accounts payable and accrued expenses	2,430	1,626	4,056
Deferred revenue and other	3,118	4,096	7,214
Net cash provided by operating activities	15,105	27,627	42,732
CASH FLOWS FROM INVESTING ACTIVITIES:			
Change in investments	(10,060)	(15,127)	(25,187)
Property additions	(4,805)	(14,463)	(19,268)
Net cash used in investing activities	(14,865)	(29,590)	(44,455)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Payments on long-term debt		(1,290)	(1,290)
Contributions restricted for endowment		1,633	1,633
Net cash provided by financing activities	-	343	343
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	240	(1,620)	(1,380)
BEGINNING CASH AND CASH EQUIVALENTS		3,162	3,162
ENDING CASH AND CASH EQUIVALENTS	$ 240	$ 1,542	$ 1,782

TAB C

Scripps Florida Scientific Report 2004

THE SCRIPPS RESEARCH INSTITUTE

SCIENTIFIC REPORT 2004
FOR SCRIPPS FLORIDA

On the front cover: In 1918, the great flu pandemic swept the world, killing an estimated 20 million to 40 million people, making it the largest and most destructive outbreak of any infectious disease in recorded history. The cover illustrates the devastation and the scale of the epidemic that the world experienced in 1918 (photograph of influenza ward at Camp Funston, Kansas). From another army ward in Fort Jackson, South Carolina, lung biopsy material was removed from a dead soldier and fixed in formalin. A section stained with hematoxylin and eosin (overlay) shows acute bronchiolitis and alveolitis. This lung sample was recently examined by Jeffery Taubenberger, M.D., Ph.D. Using reverse transcriptase–polymerase chain reaction, he found that the sample contained influenza virus RNA, enabling deduction of the coding sequence for the viral hemagglutinin (partial sequence of the 1918 gene at top in background). From this reassembled gene, the crystal structure of the 1918 hemagglutinin was determined by James Stevens, Ph.D., in the laboratory of Ian A. Wilson, D.Phil., Department of Molecular Biology, Scripps Research. Both are members of 1918 flu consortium funded by the National Institutes of Health. Members of the consortium are using a multidisciplinary approach to understand the virulence of this extinct virus. Photos courtesy of the National Museum of Health and Medicine and Dr. Taubenberger, Armed Forces Institute of Pathology, Washington, D.C.

This report accompanies and augments The Scripps Research Institute Scientific Report 2004. In future years, the activities of Scripps Florida will be included, but separately identifiable, in The Scripps Research Institute Scientific Reports.

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THE SCRIPPS RESEARCH INSTITUTE FLORIDA

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James P. Tam, Ph.D.
Professor

Neurobiology
John Hogenesch, Ph.D.
Professor and Head
Biomedical Sciences and Genome Technology
Nagi Ayad, Ph.D.
Assistant Professor
Teresa Reyes, Ph.D.
Assistant Professor
Julie Baggs, Ph.D.
Research Associate
Jeanne Geskes
Research Assistant IV

Infectology
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Professor and Chairman
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Cheryl Demczyk
Research Assistant I
Sukhvir Mahal, Ph.D.
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Alexandra Sherman
Research Assistant II
Prem S. Subramaniam, Ph.D.
Research Associate
Vittorio Verzillo, Ph.D.
Senior Research Associate
Marilena Fernandez
Administrative Assistant III

ADVANCED TECHNOLOGY

Genome Technology

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Professor and Head
Biomedical Sciences and Genome Technology

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Bruce Pascal
Database Administrator IV

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DMPK Proteomics and DMPK
Jennifer Busby, Ph.D.
Associate Science Director,
Proteomics

DRUG DISCOVERY

DMPK

Patrick Griffin, Ph.D.
Professor and Head,
DMPK
Proteomics and DMPK
Li Lin
Senior Research Assistant

Lead Identification - HTS Assay Development

Pharmacogenomics
Claes R. Wahlestedt, M.D., Ph.D.
Professor and Director,
Pharmacogenomics,
Lead Identification - HTS Assay Development

Medicinal Chemistry

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Professor and Executive Director
Congxin Liang, Ph.D.
Associate Director
Yangbo Feng, Ph.D.
Senior Scientist
Yuanjun He, Ph.D.
Research Associate
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Senior Scientist
Marcel Konig, Ph.D.
Senior Staff Scientist
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Staff Scientist
Tomas Vojkovsky, Ph.D.
Scientific Associate

NHR
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Staff Scientist
Mike Chalmers, Ph.D.
Staff Scientist
Swati Prasad, Ph.D.
Research Associate

ADMINISTRATION

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Manager
Marlynn Duvall
Development Associate
Robert Rothman
Research Aide II

Human Resources

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Director
Elixsandra Fernandez
Administrative Assistant III

Procurement

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Procurement Manager
Audric Dodds
Coordinator, Office of Supplier Diversity
Mark Bargerstock
Shipping & Receiving Specialist

Scientific Operations

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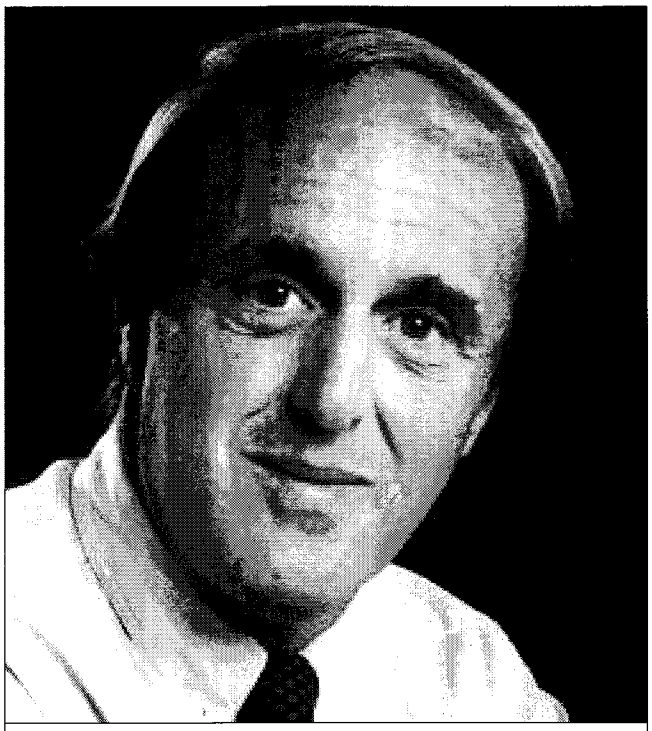
Vice President
Candace Walker
Program Administrator



Richard A. Lerner, M.D.

Scripps Florida Moves Forward

Substantial progress has been made in shaping the scientific scope of the Scripps Florida enterprise and in recruiting a strong roster of scientific faculty and administrative management. Our first announcement early this year was the recruitment of internationally renowned scientist Charles W. Weissman, a pioneer in modern biomedical research and molecular biology. Formerly a senior research scientist in the Department of Neurodegenerative Diseases at University College London, London, England, he heads the Scripps Florida Department of Infectology. Among Dr. Weissmann's research interests are the pathogens that cause malaria and tuberculosis and such prion diseases as mad cow disease.

More recently, we announced the recruitment of noted chemist William R. Roush as professor of chemistry, executive director of medicinal chemistry, and associate dean of the Florida graduate programs. Currently the Warner Lambert/Parke Davis Professor of Chemistry and chair of the Department of Chemistry at the University of Michigan, Ann Arbor, Michigan, he will begin work at Scripps Florida in early 2005. Dr. Roush is recognized for his groundbreaking research in the analysis, structural determination, and synthesis of complex, biologically active, natural products that may lead to the development of new drugs. Further, he has been a mentor to two generations of chemists, a role he will continue with Scripps Florida graduate students and postdoctoral fellows.

We have created the framework for the scientific research that will be undertaken at Scripps Florida, including developing leading-edge technologies to enable scientists to examine the basic biology of human health and find new and better treatments for a variety of devastating human diseases. These programs have been specifically designed to answer the most important questions in biology and medicine and will address such diseases as AIDS, cancer, diabetes, obesity, prion diseases, Parkinson's disease, and schizophrenia. The new research programs encompass scientific inquiry in genetic disease informatics, cancer biology, infectology, the genetics of complex diseases, proteomics, nuclear hormone receptors, drug metabolism and pharmacokinetics, diabetes and obesity, medicinal chemistry, cell-based screening, and HIV therapeutics. We have recruited more than 20 highly accomplished scientists who will carry out much of the research in these new programs. They have previously held positions and appointments at many of the finest academic institutions and private companies in the world, and we are pleased that they have made the commitment to join us at the inception of our research efforts in Florida.

Executive management expertise is critical to the efficient operation of research activities. To this end, we have appointed Harry W. Orf as vice president of scientific operations for Scripps Florida to oversee the administration and management of scientific services that will support biomedical research there. For the past 21 years, he has served as director of the molecular biology laboratories at Massachusetts General Hospital in Boston; he also is a principal associate in genetics at Harvard Medical School, Boston, Massachusetts. His management and administrative experience includes memberships on the boards of directors of several biotechnology companies.

We also appointed Will E. Ray, Ph.D., to our team as director of external affairs for Scripps Florida and as vice president for development for all of Scripps Research. Dr. Ray comes to us from the Palm Beach County Cultural Council, Palm Beach, Florida, where he was president and chief executive officer for more than 20 years.

NEW MEMBERS TO THE BOARD OF TRUSTEES

At no time in the history of the organization has strong leadership from the board of trustees been more important in making decisions that will leave an indelible mark on the future of Scripps Research. This year we have been fortunate in recruiting three distinguished and accomplished Floridians to the Scripps Research Board of Trustees.

Alexander W. Dreyfoos owns and directs the Dreyfoos Group, a private capital management firm that grew out of his previous ventures, including Photo Electronics Corporation and WPEC-TV, the CBS network affiliate in West Palm Beach, Florida.

Phillip Frost is a clinical professor of dermatology at the University of Miami School of Medicine, Miami, Florida. He also has served in leadership positions with many corporations and organizations and is currently a director of Northrop Grumman Corporation, a governor of the American Stock Exchange, chairman of the board and chief executive officer of IVAX Corporation, and chairman of the board of trustees at the University of Miami.

Lawrence F. De George is chairman and chief executive officer of LPL Investment, Inc., and LPL Group, Inc., in West Palm Beach, Florida. He also is founder and chairman of CompleTel L.L.C., a competitive local exchange carrier in Amsterdam and Paris; director of United Global Communications, Inc.; founder and chairman of Cervalis; and founder and director of Advanced Display Technologies.

The establishment of Scripps Florida is a landmark in the history of The Scripps Research Institute. With the decisions and actions taken in 2004, a governance, administrative, financial, and scientific foundation has been put in place that will support significant scientific discoveries and applications, growth, and good management for many years ahead.

BIOMEDICAL RESEARCH

Biomedical Sciences

Biochemistry

James P. Tam, Ph.D.
Professor

RESEARCH SUMMARY

HIV Entry Inhibitors

Infection by HIV-1 requires fusion of the viral and cellular membranes mediated by envelope glycoprotein gp120 and gp41. This process offers opportunities for intervention because 3-dimensional structures of critical proteins have been determined, including the protein gp41 that forms trimers-of-hairpins commonly involved in the final step of membrane fusion. A promising target is a fusion-active prehairpin intermediate that is exposed after gp120-binding with cell surface receptors. In this fuseogenic state, the prehairpin cross-links two different membranes, exposing an amino- and carboxyl-homotrimeric α-helical coiled ectodomain (N- and C-region) that eventually forms a hairpin structure of a six-helix bundle bringing the amino- and carboxyl-terminal regions of the gp41 ectodomains into close proximity enabling membrane fusion. Synthetic peptides targeting these domains are effective fusion inhibitors and constitute a new class of HIV pre-entry therapeutics. However, the first-generation peptidyl drug candidates have limitations that include high dosage and poor stability. This project focuses on developing novel protein mimetics of gp41as second-generation fusion inhibitors to improve the potency and stability of the peptide-based therapeutics. To mimic the fuseogenic conformation and the stability of the prehairpin state of trimeric coiled-coil quaternary structure, we postulate that 3-helix protein mimetics (called 3-α mimetics) as covalent-linked trimeric coiled coils can confer stable structures. We further hypothesize that 2-helix protein mimetics (called 2-α mimetics)of the C-region as covalent-linked dimeric coiled coils may increase potency by forming a 5-helix-bundle with the fuseogenic N-region of gp41. In support of these hypotheses, we show that 2-α and 3-α mimetics show protein-like properties and more importantly, potency by one to several orders of magnitude at subnanomolar concentrations. These protein mimetics represent the most potent antiviral fusion inhibitor known today.

Growth Factors and Cytokines

Corruption of signaling mechanisms is a recurring theme in disease pathogenesis. Most intervention methods have centered on disrupting upstream signaling pathways such as the ligand-receptor interactions of growth factors and cytokines on cell surfaces. In contrast, few intervention methods have been developed that block downstream intracellular targets these methods often require an invasive method such as microinjection to deliver macromolecules. This project focuses on developing a non-invasive approach for intracellular delivery using membrane-permeable protein mimetics to reach specific targets in distinct subcellular compartments. We will develop a novel platform for intracellular delivery with specific peptide cargoes and detection probes to target intracellular soluble proteins and those anchored on the inner cytoplasmic surface such as the cytoplasmic tail of transforming growth factor-α (TGF-α). Our goal is to provide an effective strategy for designing inhibitors capable of delivery to specific subcellular compartments to block signaling mechanisms relevant to human diseases. A concurrent goal focuses on developing new forms of intracellular "synthetic antibodies" to pull down specific intracellular proteins to dissect signaling pathways.

HIV-1 Synthetic Vaccines

Cumulative evidence in the past decade through immunization, antibody-binding studies and deletion mutagenesis have shown that the HIV envelope proteins gp120 and gp41 have evolved multiple structural features to evade neutralizing antibody responses in humans. This project is aimed at developing a focused approach using structure-based antigens to elicit specific and qualitatively useful immune responses. We will use a protein mimetic strategy developed to engineer two highly conserved antigens that represent intermediate states during the entry and fusion process of HIV-1 to host cells. These antigens include a discontinuous region of gp120 known as the "bridging sheet" consisting of four antiparallel β-strands (β-4 domain) and two coiled-coil helical regions (α-3 domains) of gp41. Our goals are to design and develop methods, first to mimic their tertiary and then quaternary structures to mimic bioactive conformations that may elicit quality antibodies with broad neutralizing activity. We will also develop methodology to enhance their immunogenicity of their trimeric structures. It is our intention to apply an

integrated program of design, synthesis, structural elucidation, biochemical analysis and immunological validation in small animals to develop protein mimetics as potential HIV subunit vaccine candidates.

Biographical Sketch

EDUCATION

1971 - 76: Ph.D. University of Wisconsin, Madison, Medicinal Chemistry (Advisor: Dr. Daniel H. Rich)
1968 - 71: B. S. (magna cum laude) University of Wisconsin, Chemistry

EXPERIENCE

1992 – Jan 2005: Professor, Vanderbilt University, Department of Microbiology, Immunology and Biochemistry
1992 – Jan 2005: Adjunct Professor, Vanderbilt University, Department of Biochemistry
1982 – 92: Associate Professor, The Rockefeller University, Biochemistry
1980 – 82: Assistant Professor, The Rockefeller University, Biochemistry
1977 – 80: Research Associate, The Rockefeller University, Biochemistry
1976 – 77: Postdoctoral Fellow, The Rockefeller University, Biochemistry (Advisor: Dr. Bruce Merrifield)

AREAS OF INTEREST

- Peptide and protein chemistry; abiotic protein synthesis, peptide chips for proteomics
- Design and engineering of peptides, proteins, protein mimetics, and biopolymers with unusual architectures for bioactive molecules, antimicrobial peptides, growth factors, cytokines, vaccines, enzymes and synthetic antibody
- Intracellular delivery of small peptides as inhibitors of signal transduction

AWARDS AND HONORS

2005 - Ralph Hirschman award by American Chemical Society
2003 - Rao Makineni Lecture, American Peptide Society, USA
2001 - Distinguished speaker, Kyoto Pharmaceutical University
1998 - Visiting Professor, Peking University, China
1996 – 1998: Visiting Professor, Institute of Materia Medica, Peking, China
1996 - Cathay Award, Chinese Peptide Society, China
1987 - Bachem Award for Excellence in Peptide Research
1986 - Vincent du Vigneaud Award for Young Investigators in Peptide Research, American Peptide Society, USA
1986 - Presidential Award, Triton Biosciences, Inc., USA

PROFESSIONAL ACTIVITIES

Member of American Chemical Society, American Association for the Advancement of Science, American Society for Biochemistry and Molecular Biology, The Protein Society, American Peptide Society (Councilor 1991-97, 99-05)

CONSULTANT AND SCIENTIFIC ADVISORY BOARD

Sep 2004-Mar 2006: Member of BMRC Extramural grant proposals review panel (basic research)
Aug 2004: Governance of Biomedical Research Committee, Singapore
Aug 2004: Chair, Subcommittee, Centre for Chinese Medicine, Singapore
Jul 2004: Working Committee, Centre for Chinese Medicine, Singapore
Feb 2004: A*Star Grant Review Committee, Division of Johns Hopkins Medicine in Singapore
May 2003: SARS Proposal Evaluation Committee (SPEC)
2003 - present: Expert reviewer, Professional & Research Committee, Singapore Heart Foundation
2003 - present: SAB, Asia Life Science Private Equity Company, HK
2003 – Present: BioInformatics Research Center, Member of Advisory Committee, Singapore
2002 – 2003: Advisory Board, Research Reporter, Lippincott Williams & Wilkins, USA
2002 – present: National Biosafety Committee, Ministry of Environment, Singapore
2002 – Present: Director, Temasek Life Sciences Laboratory, Singapore
2002 – Present: Chairman, Temasek Life Sciences Laboratory Search Committee,
2002 – present: Review Panel, Biomedical Sciences, A*Star, Singapore
2001 – 2003: Expert Panel, Water Reclamation Demonstration Plant Study, Public Utility Board, Singapore
1999 – 2002: Cytovax Biotechnologies Inc, USA (SAB)
1999 – 2001: Metrika, USA (SAB)
1998 – 99: Sphinx-Lilly Pharmaceutical Company, USA
1996 – 2000: Astra Pharmaceutical Company, USA
1993 – 95: Abbott Laboratory
1992 – 2000: Network Centres of Excellence, Medical Research Council of Canada

1992 – 95: Immunologic, Inc.
1991 – 93: Armour Pharmaceutical, Inc.
1990 – 91: Mallinckrodt Chemical, Inc.
1989 – 93: Study section for Bio-organic and Natural Product Chemistry
1988 – 93: AutoImmune Technologies, Inc. (Scientific Advisory Board)
1988 – 92: Applied Biosystems, Inc.
1988 – 90: Fish & Neave, Inc.
1988 – 90: Smith Kline & Beckman, Inc.
1988 – 92: Arris Pharmaceutical Corp. (Co-founder, Scientific Advisory Board)
1986 – 88: Burroughs Wellcome, Inc.
1986 – 88: General Foods, Inc.
1985 – Present: Ad hoc reviewer for NSF and NIH
1985 – 88: Vega Biotechnologies, Inc.
1984 – 90: United Biomedical, Inc. (Scientific Advisory Board)
1984 – 89: Triton Biosciences, Inc.

EDITORIAL ACTIVITIES

2001 – Present: Editorial Board member, Asia Pacific Biotech
2000: Guest Editor, Biopolymers, Peptide Science, Vol. 51(5)
1999 – Present: Associate Editor, J. Peptide Research
1997 – Present: Editorial Board, J. Peptide Research
1997, 99: Co-editor, Proceedings of The 15th American Peptide Symposium
1992 –present: Co-editor, Proceedings of The Chinese Peptide Symposium
1992: Guest editor, Int. J. Peptide & Protein Research
1989 – 96: Core expert analyst, CHEMTRACTS
1988 – 96: Editorial board, Peptide Research
1988: Editor, UCLA Symposia on Mol. & Cell. Biology, Vol. 89

INVITED LECTURES: 205
PUBLICATIONS: 287
PATENTS: 13

Biomedical Sciences

Neurobiology

John Hogenesch, Ph.D.
Professor, Biomedical Science
Director, Genome Technology

RESEARCH SUMMARY

Regulation of Mammalian Circadian Physiology

Our laboratory is interested in circadian regulation of physiology. Circadian rhythms are conserved from cyanobacteria, Neurospora, Drosophila, mice, and man, each species regulating aspects of its physiology to be in tune with the environment. In mammals, complex behaviors such as locomotor activity, and physiologies such as heme biosynthesis, hormonal signaling, and temperature rhythms are regulated by the clock. Interestingly, in all of the above species, the clock itself is regulated at the level of transcription. Several transcription factors conserved between flies, mice and man have been identified as clock components, including members of the bHLH-PAS family, CLOCK, MOP3/bMAL, PER1, PER2, and PER3, and repressor proteins called cryptochromes, CRY1 and CRY2. Along with some accessory factors, these genes work in concert to generate molecular rhythms of transcription with a period length of twenty-four hours. Currently, we are attempting to draw a link between this core transcriptional mechanism and the biological processes regulated by the circadian clock taking full advantage of the unique resources available at Scripps.

Biographical Sketch

EDUCATION

B.A., History, University of Southern California
B.S., Biology, University of Southern California
Ph.D., Northwestern University

EDUCATION/TRAINING

University of Southern California, B.A., 1989
University of Southern California, B.S., 1991, Biology
Northwestern University, Ph.D., 1999, Neuroscience
University of Wisconsin-Madison, Postdoc, 1999, Neuroscience
The Scripps Research Institute/Genomics Institute of the Novartis Research Foundation, Postdoc, 2000, Neuroscience

POSITIONS AND HONORS:

1991-2, Research Technician, Northwestern University Medical School, Chicago, IL.
1992-1998, Graduate Student, Northwestern University, Evanston, IL.
1998-9, Postdoctoral Associate, University of Wisconsin, Madison, WI.
1999-2000, Postdoctoral Associate, The Scripps Research Institute/The Genomics Institute of the Novartis Research Foundation, La Jolla, CA.
2000-2004, Program Manager of Genomics, The Genomics Institute of the Novartis Research Foundation, La Jolla, CA.
2003-2004, Assistant Professor, Department of Neuropharmacology, The Scripps Research Institute, La Jolla, CA
2004-present, Professor and Director of Genome Technology, The Scripps Research Institute, West Palm Beach, FL

PROFESSIONAL ORGANIZATIONS AND AWARDS:

Molecular Biology Training Program, Northwestern University, 1994-1995
Society of Neuroscience
FASEB 2000-2004
Member of the Scientific Advisory Board, Chemical Industry Institute of Toxicology, 2004-present
Member of the Scientific External Planning Committee, The National Center for Biotechnology, Information (NCBI), 2003-
Member of the Scientific Advisory Panel, The National Institute of Neurological Disorders and Stroke, (NINDS), The Gensat Project, 2003-present

PUBLICATIONS: 38

Biomedical Sciences

Neurobiology

Nagi G. Ayad, Ph.D.
Assistant Professor, Biomedical Science

RESEARCH SUMMARY

Generally, my laboratory at Scripps Florida focuses on understanding the role that ubiquitin mediated proteolysis plays in differentiation, cell cycle decisions, and cancer progression. My prior work has identified a novel cell cycle regulator named Tome-1, or trigger of mitotic entry. This protein is an F-box protein that associates with the SCF components Skp-1 and Cul-1 and is required for degradation of the cdk1 inhibitory kinase wee1. Interestingly, Tome-1 itself is also degraded in a cell cycle specific manner by the Anaphase Promoting Complex or APC. The discovery of Tome-1 not only identified an essential cell cycle regulator, it also uncovered a new checkpoint mechanism. Further, it established that one E3 ubiquitin ligase can target another E3 ligase for degradation, a model that is supported by my recent finding that the APC can target the SCF component Skp2 for degradation. Subsequent work from other groups has shown that Tome-1, Skp-2, and components of the APC are overexpressed in various forms of cancers, thereby highlighting the therapeutic potential of inhibiting these proteins in cancers.

In addition to identifying a role for the APC in regulating entry into mitosis and S phase, I have recently discovered that the APC is required for exiting the cell cycle and initiating neuronal differentiation. This is an extremely important finding since the role of APC mediated proteolysis in differentiation has not been discovered. One prediction is that the APC is likely to be a master regulator of differentiation since it is a master regulator of the cell cycle. I am now collaborating with Dr. Jennifer Busby to identify by quantitative mass spectrometry APC substrates turned over during differentiation of neuronal precursors. I have also initiated collaborations with Drs. Trey Sato and Josephine Harada here at Scripps Florida to look for ubiquitin ligases like the APC that will be involved in neuronal differentiation. I find this work especially exciting since it will impact the development of cancer therapy and nerve regeneration.

Biographical Sketch

EDUCATION

1999-2004, Post-Doctoral Fellowship, Department of Cell Biology, Harvard Medical School
1993-1998, Ph.D., Department of Cell Biology, Yale Medical School
BA 1992, Rutgers College, Rutgers University

TEACHING EXPERIENCE

2001-2002 Teaching Fellow, Cell Biology, Harvard University (responsible for teaching Harvard undergraduates cell biology)
1994-1996 Teaching assistant, Histology, Yale Medical School (responsible for teaching Yale Medical School students both histology and cell biology)1995-1996 Teaching assistant, Cell Biology
1994-1995 Cell Biology /Histology Tutor

RESEARCH EXPERIENCE

1/2005-Present, Assistant Professor, Biomedical Sciences, The Scripps Research Institute, Scripps Florida, Palm Beach County, Florida
1/1999-12/2004 Postdoctoral Research Associate with Dr. Marc W. Kirschner, Harvard Medical School
1993-1998 Doctoral Dissertation with Dr. Ira Mellman, Cell Biology Department, Yale Medical School
1992-1993 Biochemist, Merck & Co., Inc., Rahway NJ
1990-1992 Henry Rutgers Thesis, Dr. WilliamMoyle, UMDNJ-Rutgers Medical School

INVITED LECTURES: 9

PUBLICATIONS: 10

PATENTS: 1

Biomedical Sciences

Neurobiology

Teresa M. Reyes, Ph.D.
Assistant Professor, Biomedical Science

RESEARCH SUMMARY

Research within my lab is delineating circuitry within the brain responsible for coordinating changes in appetite and metabolism, in both healthy and challenged animals. Challenges routinely studied within the lab include acute or chronic immune activation, as well as a neurogenic stressor, such as mild restraint. In response to each of these challenges, animals demonstrate reduced appetite and changes in metabolism, however, the brain circuitry that coordinates these responses is not well defined. Multiple levels of analyses are used to address these questions, including functional neuroanatomical approaches, investigation of global transcriptional changes as well as behavioral assays. This combination of techniques employed in a range of healthy, challenged, and genetically altered animals, provides a unique opportunity to define the brain pathways that mediate this critical homeostatic process.

Biographical Sketch

EDUCATION

Ph. D 1999.-.University of Wisconsin, Madison, WI, Psychology
M.S. 1995.-.University of Wisconsin, Madison, WI, Psychology
B. S. 1992.-.University of Wisconsin, Madison, WI, Psychology

EXPERIENCE

2003-2004 - Senior Research Associate, Salk Institute for Biological Studies, Laboratory of Neuronal Structure and Function
1999-2003 - Postdoctoral Research Fellow, Salk Institute for Biological Studies, Laboratory of Neuronal Structure and Function PI: Paul E. Sawchenko
1996 - Teaching Assistant: Animal Behavior-The Primates
1992-1994 - Research Technician, Department of Biochemistry and Molecular Biology, University of Chicago PI: James A. Shapiro

ACHIEVEMENTS AND AWARDS

National Research Service Award-Postdoctoral Fellowship, National Institutes of Health
National Research Service Award-Predoctoral Fellowship, National Institutes of Health
University Fellowship, University of Wisconsin
Vilas Fellowship, University of Wisconsin
Predoctoral Fellowship, National Science Foundation
Winner of Sigma Xi Dissertation Competition
Gilchrist Award - Outstanding Undergraduate Psychology Thesis
Phi Beta Kappa
Trewartha Undergraduate Research Award

PROFESSIONAL SOCIETIES

Society for Neuroscience
Psychoneuroimmunology Research Society

PUBLICATIONS: 13; Book Chapters - 1

CONFERENCE PRESENTATIONS/ORAL: 8

CONFERENCE PRESENTATIONS/POSTERS: 9

INVITED LECTURES: 1

Infectology

Charles Weissmann, M.D., Ph.D., For.Mem.R.S.
Chairman and Professor

RESEARCH SUMMARY

The Department of Infectology of Scripps Florida will ultimately comprise groups working on various infectious or transmissible diseases. Currently the major emphasis is on prion disease, which is being studied in a mouse model, but a project aimed at discovering a drug against Leishmania, a tropical disease affecting many third world nations is also being developed, in collaboration with other institutions. Our further aim is to establish research in the hepatitis C field and one principal investigator will be starting work after our move to Jupiter. We are also committed to providing the Institute with a core facility for phage display technology.

The work is currently supported by Scripps and we have applied for a grant of $500,000 from the Arthritis Foundation to fund the phage display core.

1. Prion Disease. The questions we are addressing concern the mode of replication of the pathogenic agent, the prion. It has been established with a high degree of certainty that the major component of the prion, if not the only one, is a conformational variant of a host protein, designated PrP, and the as yet unanswered question is how the normal form is converted into the disease-causing form.

- Rather than experimenting on mice to study this issue, we use cultured cells that can be infected with prions. We have set up a cell-based assay ("Scrapie Cell Assay" or SCA) that is 10 times faster than the mouse bioassay, at least as sensitive and more precise. Because the cell line we have isolated so far is susceptible only to mouse prions of the RML strain, we are searching for cell lines susceptible to prions from other species and to different mouse strains.
- Another important question we are investigating concerns the mechanism by which prions are transferred from one cell to another. In conjunction with Peter Kloehn (Prion Unit, MRC, London) we have found that scrapie-infected neuroblastoma cells secrete infectious agent that appears to be more tractable for analysis than the agent from infected brain, which is usually used. We propose to characterize this particulate agent in detail, determine how it is produced and how it infects cells.
- We have discovered previously that prions attach very tenaciously to metal and plastic surfaces and that cells that contact such surfaces acquire prion infection. We wish to determine whether this infection is the result of a hit-and-run mechanism or whether infectious particles desorb at a low rate and then infect cells. This research is important in connection with the question how surgical instruments transmit infection and how they can be effectively sterilized or prevented from adsorbing prions.

In collaboration with E. Beutler, Scripps La Jolla, we are exploring a project aimed at discovering which genes play a role in making a host susceptible to peripheral infection by prion disease and how the immune system of the host attempts (or not) to deal with the infectious agent.

We intend to further develop the SCA to provide a even more rapid and higher-capacity assay, in collaboration with John Hogenesh, that we intend to use to screen chemical libraries for compounds that suppress propagation of prions and thus can serve as potential drugs.

Current members of the Prion Group are Dr. Chris Baker, Dr. Sukhi Mahal, Cheryl Demczyk and Alexandra Sherman, all at Scripps Florida. A further postdoctoral student is being hired for June and a Principal Investigator will join us in April.

2. Search for a drug against Leishmaniasis. Leishmaniasis is a disease prevalent in India, Nepal, Sudan Brazil and other Third World countries. Piet Borst (NKI Amsterdam) and Robert Sabatini discovered that the DNA of Leishmania contains a modified base and they isolated a protein that binds to it (JBP, J-Binding Protein). Because the protein is essential for the survival of Leishmania, we posit that if binding is prevented by a drug this could be lethal for the microorganism but not for the host. We have prepared JBP, Dr. Paul Wentworth (Scripps LaJolla and Oxford) has synthesized a fluorescently labeled oligonucleotide containing the J nucleotide and Dr. David Millar is working out a high-throughput p[rocedure for measuring the two components. We shall then screen chemical libraries for compounds that can prevent binding, optimise them and select those that have an effect on the survival of Leishmania.

Current members of the collaboration are Prem Subramaniam (Scripps Florida), Piet Borst (NKI Amsterdam), Robert Sabatini (U. of Alabama), David Millar (Scripps LaJolla) and Paul Wentworth (Scripps LaJolla, Oxford).

3. Search for a drug against hepatitis C. Hepatitis C caused by an RNA-containing virus. It affects over 170 million people worldwide and can lead to chronic hepatitis, cirrhosis and liver cancer. Dr. Donny Strosberg, who will join TSFRI in March, has identified domains of hepatitis C viral proteins that interact with each other or with viral host proteins. He intends to screen a chemical library for compounds that disrupt protein-protein interactions and search for compounds that can permeate the host cell and disrupt viral replication without damaging the host.

4. Phage display library as core function for Scripps Florida. A phage display library is a collection of recombinant phages that express a huge variety of antibody genes. By exposing the phage to a particular protein or epitope, one can isolate phage expressing an antibody to the antigen. The gene can be recovered and used to express the antibodies in quantity. This is an extremely useful tool in molecular biology, and Dr. Vittorio Verzillo (Scripps Florida), who has great experience in the field, is developing this resource. A technician will be hired to aid him.

Biographical Sketch

EDUCATION

Kantonales Gymnasium, Zürich 1946-1950
Zürich University, 1950-1961
Degrees of M.D. (1956) and Ph.D. in Organic Chemistry (1961)

FORMER POSITIONS

Assistant to Professor P. Karrer, Zürich University, 1960-1961
Postdoctoral Fellow, New York University School of Medicine, Department of Biochemistry, 1961-1963,
Instructor in Biochemistry, New York University School of Medicine, Department of Biochemistry, 1963-1964
Assistant Professor in Biochemistry, New York University School of Medicine, Department of Biochemistry, 1964-1965
Associate Professor in Biochemistry, New York University School of Medicine, Department of Biochemistry, 1965-1967
Professor extraordinarius in Molecular Biology, 1967-1970
Professor ordinarius in Molecular Biology, 1970-1999
Director of the Institute of Molecular Biology, University of Zürich, 1967-1999
Professor emeritus, University of Zürich, since 1999.
Senior Research Scientist and Visiting Professor, MRC Prion Unit, St.Mary's Hospital (1999-2001) and University College, London since 2001

AWARDS AND HONOURS

Ruzicka Prize in Chemistry (Switzerland, 1966)
Marcel Benoist Prize, Bern (1970)
Sir Hans Krebs Medaille, Budapest (1974)
Honorary Member of the American Society of Biological Chemistry (since 1979)
Otto Warburg Prize, Innsbruck (1980)
Member of the Deutsche Akademie der Naturforscher Leopoldina (since 1980)
Dr. H.P. Heineken Prize, Amsterdam (1982)
Scheele Medal, Uppsala (1982)
Foreign Member of the Royal Society (since 1983)
Honorary Member of the American Academy of Arts and Sciences (1985)
Cancer Prize (Krebspreis) of the Schweizerische Krebsliga (1987)
Jung-Preis für Medizin, Hamburg (1988)
Foreign Associate of the U.S. National Academy of Sciences (1989)
Gabor Medal of the Royal Society (1993)
Robert-Koch Medal (1995)
Datta Lectureship Award of the FEBS (1996)
Charles-Léopold Mayer Prize of the French Academy of Science (1996)
Royal Society Glaxo Wellcome Prize (1996)
Honorary Member, Dept. of Biochemistry, University of Oxford (1997)
Member of the Schweizerische Akademie der Medizinischen WIssenschaften (1997)
August-Wilhelm-von-Hofmann-Denkmünze (Gesellschaft Deutscher Chemiker, Wien 1997)
Klaus-Joachim-Zülch-Preis (Max-Planck-Gesellschaft, 1997)
Max Delbrück Medal (Berlin, 1997)
Wilhelm-Exner-Medaille (Wien, 1997)
Distinguished Service Award (Miami, 1998)
Corresponding Member of the Nordrhein-Westfälischen Akademie der Wissenschaften (1998)

Ausländisches Mitglied des Orden pour le mérite für Wissenschaften und Künste (Bonn, 1998)
Mendel Medal (Genetical Society, London, 1998)
Extraordinary Member of The Berlin-Brandenburgischen Akademie der Wissenschaften (Berlin, 1999)
Samuel Rudin Distinguished Visiting Professor (1999, Columbia University, N.Y.)
Fellow of the American Academy of Microbiology (Washington, 1999)
Visiting Professor, Rochester University (2001)
Visiting Professor, Imperial College of Medicine (1999-2002)
Betty and David Koetser Award (Zürich, 2001)
Fellow of the Academy of Medical Sciences (London, 2001)
Friedrich-Bauer-Prize for Medical Research (University of Münich, 2001)
Honorary Senior Fellow, Institute of Neurology, University College London (2004)
Warren Alpert Foundation Prize (Harvard Medical School, September 2004)

HONORARY DEGREES

Doctor honoris causa, University of Verona (1992)
Doctor honoris causa, University of Gent (1994)
Doctor honoris causa, ETH Zürich (1998)
Doctor honoris causa, University of Zürich (2000)
Doctor honoris causa, University of St.Andrews (St.Andrews, 2000)
Doctor honoris causa, Ecole Federal Polytechnique (Lausanne, 2001)

OTHER ACTIVITIES

Member of the Editorial Board of Biochimica et Biophysica Acta (1965-1968)
Associate Managing Editor of Biochimica et Biophysica Acta (1968-1980)
Member of the Editorial Board of Gene (1980-1983)
Member of the Editorial Board of the EMBO Journal (1982-1986)
Member of the European Molecular Biology Organization (EMBO) (since 1968)
Member of the Schweizerische Kommission für Molekularbiologie (SKMB) (1968-1971)
President of the Zürcher Chemische Gesellschaft (1969-1970)
President of the Schweizerische Gesellschaft für Zell- und Molekularbiologie (1970-1972)
President of the Roche Research Foundation (1971-1977)
Member of the Scientific Board of Biogen (1978-1988)
Chairman of the Scientific Board of Biogen (1984-1986)
Associate Editor of Cell (1983-1988)
Member of the Board of Governors of the Weizmann Institute of Science (since 1985)
President of the Ernst Hadorn Stiftung (since 1986)
Member of Scientific Advisory Board ZMB, Heidelberg (1988-1990)
Member of the Scientific Council of the Swiss National Fund (1989-1994) and President of the Section IIIA (1992-1994)
Member of the Board of Directors of F. Hoffmann-La Roche Ltd., Basel (1989-2001)
Member of the Human Genome Organisation (HUGO) (since 1989)
Member of the Academia Europaea (since 1989)
Member of the International Scientific Advisory Board of the Netherlands Cancer Institute (Amsterdam)
Member of the Scientific Advisory Board of the Roche Institute of Molecular Biology, Nutley (1993-1995)
Member of the Scientific Advisory Board of the Osaka Bioscience Institute, Osaka (1993-1998)
Member of the Scientific Advisory Board of the Institut Suisse de Recherche sur le Cancer (ISREC), Lausanne (1994-1999)
Member of the Scientific Advisory Board of Roche Molecular Systems, Alameda Ca. (1994-98)
Member of the Scientific Council of the International Human Frontiers Research Program (1994-1998)
Associate Editor of Molecular Medicine (1994-2000)
Chairman of the European Commission Group on Bovine Spongiform Encephalopathy (1996)
Member of the Board of Governors of Tel Aviv University (since 1997)
Member of the Editorial Board of the Proceedings of the Royal Society (since 1999)
Member of Board of Directors of Speedel (since 2003)
Member of the Scripps Board of Scientific Governors (2004)

SPECIAL LECTURES: 37

PUBLICATIONS: 302

ADVANCED TECHNOLOGY

Genome Technology

John Hogenesch, Ph.D.
Professor, Biomedical Science
Director, Genome Technology

RESEARCH SUMMARY

Regulation of Mammalian Circadian Physiology

Our laboratory is interested in circadian regulation of physiology. Circadian rhythms are conserved from cyanobacteria, Neurospora, Drosophila, mice, and man, each species regulating aspects of its physiology to be in tune with the environment. In mammals, complex behaviors such as locomotor activity, and physiologies such as heme biosynthesis, hormonal signaling, and temperature rhythms are regulated by the clock. Interestingly, in all of the above species, the clock itself is regulated at the level of transcription. Several transcription factors conserved between flies, mice and man have been identified as clock components, including members of the bHLH-PAS family, CLOCK, MOP3/bMAL, PER1, PER2, and PER3, and repressor proteins called cryptochromes, CRY1 and CRY2. Along with some accessory factors, these genes work in concert to generate molecular rhythms of transcription with a period length of twenty-four hours. Currently, we are attempting to draw a link between this core transcriptional mechanism and the biological processes regulated by the circadian clock taking full advantage of the unique resources available at Scripps.

Biographical Sketch

EDUCATION

B.A., History, University of Southern California
B.S., Biology, University of Southern California
Ph.D., Northwestern University

EDUCATION/TRAINING

University of Southern California, B.A., 1989
University of Southern California, B.S., 1991, Biology
Northwestern University, Ph.D., 1999, Neuroscience
University of Wisconsin-Madison, Postdoc, 1999, Neuroscience
The Scripps Research Institute/Genomics Institute of the Novartis Research Foundation, Postdoc, 2000, Neuroscience

POSITIONS AND HONORS

1991-2, Research Technician, Northwestern University Medical School, Chicago, IL.
1992-1998, Graduate Student, Northwestern University, Evanston, IL.
1998-9, Postdoctoral Associate, University of Wisconsin, Madison, WI.
1999-2000, Postdoctoral Associate, The Scripps Research Institute/The Genomics Institute of the Novartis Research Foundation, La Jolla, CA.
2000-2004, Program Manager of Genomics, The Genomics Institute of the Novartis Research Foundation, La Jolla, CA.
2003-2004, Assistant Professor, Department of Neuropharmacology, The Scripps Research Institute, La Jolla, CA
2004-present, Professor and Director of Genome Technology, The Scripps Research Institute, West Palm Beach, FL

PROFESSIONAL ORGANIZATIONS AND AWARDS

Molecular Biology Training Program, Northwestern University, 1994-1995
Society of Neuroscience
FASEB 2000-2004
Member of the Scientific Advisory Board, Chemical Industry Institute of Toxicology, 2004-present
Member of the Scientific External Planning Committee, The National Center for Biotechnology, Information (NCBI), 2003-
Member of the Scientific Advisory Panel, The National Institute of Neurological Disorders and Stroke, (NINDS), The Gensat Project, 2003-present

PUBLICATIONS: 38

Informatics

N. F. Tsinoremas, Ph.D.
Director of Informatics, Scripps Florida

RESEARCH SUMMARY

Drug Discovery Informatics Program

As part of Scripps Florida HTS program we are building the required informatics systems that would capture, manage, integrate and analyze the chemical compound screening data.

It is critical in molecular screening and lead discovery research that informatics extends beyond the power of data management, that is, storing data in a database, performing searches and visualizing results. Informatics systems that are truly effective are designed to integrate seamlessly scientific and laboratory research in biology and chemistry, technology and information science. They capture raw experimental data, the data context (biological and chemical), derived information and laboratory notebook entries, as well as human intuition and interpretation, providing an integrated platform that enables decision-making. Therefore, such data integration systems must be designed to provide flawless data exchange protocols allowing information integration which can vary widely from chemical structures to toxicology and literature while preventing any human and/or machine errors during these complex processes. Due to the increasing numbers of data points that are captured and more complex data analysis requirements, different strategies can be adopted to organize more effectively the data for efficient data capture and analysis.

More specifically we are implementing a data warehousing strategy that consists of two distinct but dynamically interconnected components: an Operational/ Transactional system and a Discovery system:

Operational systems encompass workflow and experimental design in a typical high throughput laboratory. In our infrastructure, such systems are designed to capture and manage diverse data types and formats providing a first level of integration, ranging from chemical structure and NMR spectra to experimental protocols for biological assays

The discovery systems are defined as a collection of tools, algorithms, and technologies used by scientists (statisticians, information scientists, biologists and chemists) to access and analyze experimentally-derived data in order to review project status and make critical decisions. These systems are designed to address the two most fundamental yet challenging questions in discovery research: a) what compound needs to be studied next and b) what compound needs to be synthesized next. In order to achieve the above goals, the discovery systems must support the following activities:

a. Data analysis and decision support

b. Knowledge Generation and Management

c. Data integration and access

As part of the Discovery systems we are developing intelligent software and computer science and artificial intelligence methods, to process and combine results from different HTS screens, secondary tests, lead profiling optimization, ADME and Toxicology studies.

Genetic Disease Informatics Program

Part of my group will focus on pattern recognition in sequences, structures and processes, the studying of systems ranging from single protein molecules through complex molecular interactions, and the data analysis, interpretation, and reverse-engineering of complex disease-genomic/genetic interactions in order to enhance our understanding of complex diseases.

More specifically we are interested in identifying and defining alternative splicing isoforms in drug target genes using a combination of novel bioinformatics tools and genomic technologies. The goals of this project will be initially to define the drugable genome and then study the role and function of the different protein isoforms. Currently, we have found several examples where existing drug targets show an interesting alternative splicing pattern and in many cases the "known" isoform appears to be the minor form in the target tissue. Understanding the splicing of such drug targets and using the appropriate isoform for screening and counter-screening can greatly increase the efficacy and specificity of a drug. So far, we have discovered several new isoforms in drug targets that confirm this hypothesis. In one specific instance, we have found that ion channels and more specifically sodium channels fall into this category. A significant result of this research is that we can influence the way that assay development and screening is done in these projects. In addition, as part of this program we will be studying the mechanisms of alternative splicing as they relate to environmental changes and genetic factors. The goal of this project is to understand the mecha-

nisms of alternative splicing and their role in biological pathways. Preliminary research has been done concerning the involvement of alternative splicing in disease pathways, especially those of cancer; however, no significant genome-wide studies have been performed using genomic technologies and advance bioinformatics strategies and algorithms to understand the underlying mechanisms and genetic component(s) of such pathways.

Biographical Sketch

EDUCATION

Ph.D. - Biochemistry and Molecular Biology—University of Leeds, England, 1991

BS. - Chemistry—University of Athens, Greece, 1988

PROFESSIONAL EXPERIENCE

Director and Head of Informatics. The Scripps Research Institute, Jupiter, FL. May 2004- present

Director of Genomic Discovery and Computational Genomics, Informatics. MRL Seattle, Merck & Co, February 2002- April 2004

Vice President of Genomics and Data Mining Tools. DoubleTwist Inc., March 2001- February 2002.

Director of Research. DoubleTwist Inc., July 1999-March 2001

Bioinformatics Scientist, Department of Bioinformatics, Incyte Pharmaceuticals, Feb. 1999-June 1999

Biocomputational Scientist, Department of Computational Biology, Progenitor, Inc.—1998

Research Scientist III, Department of Molecular Biology and Biochemistry, Energy Biosystems Corporation--1997 to 1998

Research Scientist, Department of Biology, Texas A&M University --1994 to 1997

Research Associate, Department of Biology, Texas A&M University -1992 to 1994

Research Fellow, University of Leeds and SERC Fellowship, Département de Physiologie Microbienne, Institut Pasteur, Paris, France - 1989 to 1991

INVENTION DISCLOSURES AND PATENTS: 8

PUBLICATIONS: 18

Proteomics

Patrick R. Griffin, Ph.D.
Professor, Drug Discovery, Scripps Florida

RESEARCH SUMMARY

Probing Protein Small Molecule Interactions by Hydrogen Deuterium Exchange

PPARγ, a ligand-dependent transcription factor and member of the nuclear hormone superfamily, is the molecular target of the drug class known as the glitazones. These compounds have been shown to improve muscle insulin resistance, a symptom or cause of type II diabetes, and are referred to as insulin sensitizers. The glitazones are widely prescribed in the type II diabetes population. However, these drugs have limited utility in use for mild insulin resistance or in patients with history of cardiovascular disease (CVD) due to specific receptor mediated side affects associated with the glitazones, such as weight gain, fluid retention, and plasma volume expansion. Unfortunately, the type II diabetes population has a higher incidence of cardiovascular disease. In addition, there is a clear link between body mass index (BMI) and the incidence of insulin resistance and type II diabetes. Thus, the search for a PPARγ modulator that improves muscle insulin sensitivity without the induction of weight gain and plasma volume expansion continues.

Recent studies using animal models of insulin resistance have shown that, indicators of weight gain and plasma volume expansion can be minimized without loss of insulin sensitization by the use of partial agonists of PPARγ, although the mechanism of this dissociation of efficacy from unwanted events is unclear. Studies in pre-adipocytes indicate that these partial agonists do not induce adipogenesis as do the full agonists and expression profiling has indicated that the gene expression patterns are different for the different functional classes of activators. Our group is developing a structure-based approach that is both rapid and sensitive to aid in the optimizing of conformational-selective modulators of PPARγ.

Amide hydrogen exchange (H/D-Ex) coupled with proteolysis and mass spectrometry has become a powerful technique for studying protein structure and dynamics, protein-ligand interactions and protein-protein interactions. Using H/D-Ex one can measure changes in solvent-accessibility and stability of a protein in the presence and absence of ligands, as determined from the rates of exchange of solvent deuterons with amide hydrogens. Our laboratory has applied amide hydrogen/deuterium (H/D) exchange mass spectrometry to detect compound-specific conformational stabilization within the ligand binding domain (LBD) of PPARγ. Ligand binding to PPARγ LBD alters amide H/D exchange rates in specific regions of the protein with differential magnitude and direction depending on the chemical structure of the ligand. This assay is currently being used to profile the nature of interactions of various PPARγ modulators and we have shown that perturbations in H/D exchange can be used to classify agonists, partial-agonists, and antagonists of PPARγ. More importantly, these H/D exchange profiles indicate that the mechanism of activation of PPARγ by full agonists, such as the glitazones, which involve recruitment of co-activators via stabilization of helix-12 or AF2 region of the ligand binding domain, is different for certain classes of partial agonists. In collaboration with the Scripps Florida Medicinal Chemistry group we are in the process of synthesizing analogs of a certain class of PPARγ partial agonist previously described in the literature in an effort to improve the pharmaceutical properties of this scaffold while using our H/D exchange assay to monitor the nature of receptor-compound interaction at the molecular level. Further investigation into the mechanism of activation of PPARγ by diverse chemotypes of PPARγ partial agonists is currently on-going. The overall goal of this work is to determine the relationship of ligand-induced receptor conformation to pharmacological response in rodent models of type II diabetes. To date, we have identified specific regions of the protein that provide sensors specific for binding mode and conformational induction for specific chemotypes. This structure-activity-relationship is important to the development of conformational-selective modulators of PPARγ.

In parallel to the PPARγ program, research is also underway to improve the technical aspects of the HD-Ex experiment. At present, a linear ion trap mass spectrometer performs mass analysis of peptide ions arising from the enzymatic digestion of the protein of interest. Measuring the mass increase of these peptides over time (as amide hydrogens exchange with deuterium) enables differentiation between slow and rapidly exchanging regions of the protein. If the iso-

topic envelope of two or more peptide fragments overlap, then useful on-exchange data cannot be obtained for these peptides. Thus, information on the region of the protein corresponding to these peptides is lost. Although sufficient for small proteins such as the PPARγ ligand binding domain (LBD) (<30 KDa) in which a small number of proteolytic peptides are generated (~50-100), the limited mass resolving power of the linear ion trap mass spectrometer prohibits the analysis of more complex samples such as proteins larger than 60 KDa or protein-protein complexes in which thousands of peptides may be generated in the proteolysis step.

To increase the dynamic range of the proteins and complexes that we can study by HD-Ex we have initiated a collaboration with Dr. Alan G. Marshall at the National High Magnetic Field Laboratory (NHMFL) site located at Florida State University (FSU). The Marshall group is widely acknowledged as the world leader in the development of Fourier transform ion cyclotron resonance mass spectrometry (FT-ICR MS). Originally developed by Marshall and Comisarow, FT-ICR MS provides the highest resolving power and mass accuracy of any mass analyzer (a 100 fold increase over our current ion trap mass spectrometer). The resolution of FT-ICR MS allows the deuterium uptake of more proteolytic peptides to be followed during the HD-Ex experiment, and the improved mass accuracy increases the confidence of all the peptide sequence assignments.

Recently, the Scripps Florida automated HD-Ex sample preparation robot was interfaced to a 14.5 Tesla FT-ICR mass spectrometer at the NHMFL. It should be noted that this custom built 14.5 Tesla magnet is the highest field magnet ever constructed for dedicated FT-ICR MS. The HD-Ex of the PPARγ-LBD:RXRα-LBD complex (≈70 KDa) was then performed in the presence, and absence, of a PPAR-γ full agonist and retinoic acid. This data represents the first known HD-Ex analysis of how drug binding affects the structure of an entire protein complex, rather than a single protein. This work is to be presented at the 5th North American FT-ICR MS conference to be held in Key West, FL, during April 2005.

Biographical Sketch

EDUCATION

Syracuse University 12/84 - Chemistry B.S.
University of Virginia, 4/89 - Chemistry Ph.D.
Caltech, 12/91 Biotechnology - Post-Doctoral Fellowship

PROFESSIONAL EXPERIENCE

Professor Drug Discovery, Scripps Florida, 05/04 to present
Chief Scientific Officer, ExSAR Corporation, 07/02 - 05/04
Senior Director, Basic Chemistry and Molecular Profiling Proteomics, Merck, 09/01 - 06/02
Director, Basic Chemistry and Molecular Profiling Proteomics, Merck, 05/99 – 09/01
MRL Scientific Liaison - Institute for Systems Biology, Merck, 03/01 – 06/02
Senior Research Fellow, Molecular Design and Diversity, Merck, 04/96 – 05/99
Research Fellow, Inflammation Research, Merck, 12/91-04/96
Post-Doctoral Fellow, California Institute of Technology 5/90 - 12/91
Associate Scientist, Genentech, Inc. 4/89 - 4/90
Research Assistant, University of Virginia 9/85 - 4/89

SOCIETY MEMBERSHIPS

American Society for Mass Spectrometry 1985 - present
Protein Society 1985 - present
ABRF 1996 – present

ACADEMIC AND PROFESSIONAL HONORS

Dupont Chemistry Fellow, University of Virginia 1987
Dean's Fellow, University of Virginia 1988

PUBLICATIONS

Manuscripts - 66; Book chapters - 14

Proteomics

Jennifer Busby, Ph.D.
Associate Director of Proteomics, Scripps Florida

RESEARCH SUMMARY

Proteomics Core Facility

The proteomics core at Scripps Florida has general mass spectrometry capabilities for protein and peptide identification using LCMS and LCMS/MS. Current instrumentation includes a Thermo Finnigan LTQ linear ion trap and Thermo Finnigan TSQ Quantum. Expertise exists for the identification of post translational modifications, especially phosphorylation mapping. Large scale differential experiments, examining changes in both phosphorylation and protein levels, will be performed when software is available to aid in data analysis.

As a core facility the proteomics group is responsible for providing collaborative mass spectrometry services to the other faculty at Scripps Florida. These collaborative projects will necessarily drive technology development. Current efforts in technology development include automation of IMAC enrichment of phosphopeptides and creation of software for differential analysis of mass spectrometry data.

Post translational modification of proteins play an important role in cell signaling and regulation. Phosphorylation of proteins is arguably the most important of these modifications and the identification of cellular signaling pathways provides insight into protein function and behavior. This signal is often transient and may affect only a small number of proteins at any point in time. Mapping of global cellular phosphorylation states can be used in a comparative manner to identify relevant changes in critical signaling pathways between cells in different cellular states or conditions. These differences in signaling can then be viewed as potential cause/effect points, giving clarity to the complex mechanisms of the cell.

In order to examine these phosphoproteins it is necessary to enrich the sample for the phosphorylation event. In the core facility here at Scripps Florida, this enrichment is done by Immobilized Metal Affinity Chromatography (IMAC) as described in Clinical Proteomics Journal vol 1 69-80 (2004). Although the IMAC methodology is published there are several innovations that have been made to the protocol since the initial publication. In an effort to bring this important methodology to other proteomics labs in the state of Florida, I have already begun collaborations with several labs at the University of Florida. Members of these labs were invited to Scripps Florida for a weekend long tutorial on IMAC and other mass spectrometry related methods. Experiments performed that weekend will be presented at the annual mass spectrometry conference, ASMS, in June.

Biographical Sketch

EDUCATION

Ph.D. in Chemistry University of Virginia Charlottesville, Virginia
June 1996 - Dissertation Title: Identification of Biologically Relevant Peptides by nanoflow HPLC micro Electrospray Ionization Mass Spectrometry
BS in Chemistry, St. Mary's College, Notre Dame, Indiana
1993-1996 - Major: Chemistry ACS Certification Minor: Mathematics; Graduated cum laude

PROFESSIONAL EXPERIENCE

2003-2004 - Senior Research Scientist MDS Proteomics, Charlottesville, Virginia
2001-2003 - Research Scientist, MDS Proteomics, Charlottesville, Virginia
2000-2001 - Senior Scientis, Proteome Research Institute, University of Virginia, Charlottesville, Virginia
1996-2000 - Graduate Student, Professor Donald F. Hunt, University of Virginia, Charlottesville, Virginia
1995 – Undergraduate Research Fellow, Dr. Keiji Morokuma, Emory University, Atlanta, Georgia

TEACHING

1999 - Teaching Assistant, ABRF Short Course: Sequencing Peptide MS/MS Spectra
1996 – Teaching Assistant General Chemistry Laboratory
1997 - University of Virginia, Charlottesville, Virginia
1995 – Teaching Assistant General Chemistry Laboratory
1996 - St. Mary's College, Notre Dame, Indiana

TECHNICAL ABILITIES

- Expert in operation and maintenance of Finnigan

LCQ and DECA ion trap mass spectrometers
- Operator of Finnigan LTQ-FT mass spectrometer
- Antigen identification utilizing on-line column effluent splitting
- Methods development utilizing on-line microcapillary HPLC and FT-ICR mass spectrometry
- Decreased level of detection for antigen identification by an order of magnitude
- Operator of triple quadrupole mass spectrometers including various scan modes
- Operator of Sciex QStar Pulsar QTof
- Extensive use of nanoflow microelectrospray technology
- Construction and use of microcapillary columns for HPLC and affinity chromatography
- Proficient in use of separation and enrichment systems
  - HPLC
  - SCX
  - IMAC
  - CE
  - SDS Page Gels
- Peptide Synthesis
  - Extensive use of FMOC peptide synthesis methods
  - Supervised multiple lab users on Automated Peptide Synthesizer
  - Maintenance and repair of Automated Peptide Synthesizer
- De Novo and Computer based MS/MS peptide sequence analysis
  - SEQUEST
  - MS-TAG
  - Mascot
  - BLAST
- Low level sample handling including protein digestion and gel methods
- Experience in cell culture and harvesting

ACADEMIC AND PROFESSIONAL HONORS
- American Society for Mass Spectrometry
- Sigma Xi
- American Association for the Advancement of Science

PUBLICATIONS: 14

PRESENTATIONS: 5

DRUG DISCOVERY

DMPK

Patrick R. Griffin, Ph.D.
Professor, Drug Discovery, Scripps Florida

RESEARCH SUMMARY

Probing Protein Small Molecule Interactions by Hydrogen Deuterium Exchange

PPARγ, a ligand-dependent transcription factor and member of the nuclear hormone superfamily, is the molecular target of the drug class known as the glitazones. These compounds have been shown to improve muscle insulin resistance, a symptom or cause of type II diabetes, and are referred to as insulin sensitizers. The glitazones are widely prescribed in the type II diabetes population. However, these drugs have limited utility in use for mild insulin resistance or in patients with history of cardiovascular disease (CVD) due to specific receptor mediated side affects associated with the glitazones, such as weight gain, fluid retention, and plasma volume expansion. Unfortunately, the type II diabetes population has a higher incidence of cardiovascular disease. In addition, there is a clear link between body mass index (BMI) and the incidence of insulin resistance and type II diabetes. Thus, the search for a PPARγ modulator that improves muscle insulin sensitivity without the induction of weight gain and plasma volume expansion continues.

Recent studies using animal models of insulin resistance have shown that, indicators of weight gain and plasma volume expansion can be minimized without loss of insulin sensitization by the use of partial agonists of PPARγ, although the mechanism of this dissociation of efficacy from unwanted events is unclear. Studies in pre-adipocytes indicate that these partial agonists do not induce adipogenesis as do the full agonists and expression profiling has indicated that the gene expression patterns are different for the different functional classes of activators. Our group is developing a structure-based approach that is both rapid and sensitive to aid in the optimizing of conformational-selective modulators of PPARγ.

Amide hydrogen exchange (H/D-Ex) coupled with proteolysis and mass spectrometry has become a powerful technique for studying protein structure and dynamics, protein-ligand interactions and protein-protein interactions. Using H/D-Ex one can measure changes in solvent-accessibility and stability of a protein in the presence and absence of ligands, as determined from the rates of exchange of solvent deuterons with amide hydrogens. Our laboratory has applied amide hydrogen/deuterium (H/D) exchange mass spectrometry to detect compound-specific conformational stabilization within the ligand binding domain (LBD) of PPARγ. Ligand binding to PPARγ LBD alters amide H/D exchange rates in specific regions of the protein with differential magnitude and direction depending on the chemical structure of the ligand. This assay is currently being used to profile the nature of interactions of various PPARγ modulators and we have shown that perturbations in H/D exchange can be used to classify agonists, partial-agonists, and antagonists of PPARγ. More importantly, these H/D exchange profiles indicate that the mechanism of activation of PPARγ by full agonists, such as the glitazones, which involve recruitment of co-activators via stabilization of helix-12 or AF2 region of the ligand binding domain, is different for certain classes of partial agonists. In collaboration with the Scripps Florida Medicinal Chemistry group we are in the process of synthesizing analogs of a certain class of PPARγ partial agonist previously described in the literature in an effort to improve the pharmaceutical properties of this scaffold while using our H/D exchange assay to monitor the nature of receptor-compound interaction at the molecular level. Further investigation into the mechanism of activation of PPARγ by diverse chemotypes of PPARγ partial agonists is currently on-going. The overall goal of this work is to determine the relationship of ligand-induced receptor conformation to pharmacological response in rodent models of type II diabetes. To date, we have identified specific regions of the protein that provide sensors specific for binding mode and conformational induction for specific chemotypes. This structure-activity-relationship is important to the development of conformational-selective modulators of PPARγ.

In parallel to the PPARγ program, research is also underway to improve the technical aspects of the HD-Ex experiment. At present, a linear ion trap mass spectrometer performs mass analysis of peptide ions arising from the enzymatic digestion of the protein of interest. Measuring the mass increase of these pep-

tides over time (as amide hydrogens exchange with deuterium) enables differentiation between slow and rapidly exchanging regions of the protein. If the isotopic envelope of two or more peptide fragments overlap, then useful on-exchange data cannot be obtained for these peptides. Thus, information on the region of the protein corresponding to these peptides is lost. Although sufficient for small proteins such as the PPARγ ligand binding domain (LBD) (<30 KDa) in which a small number of proteolytic peptides are generated (~50-100), the limited mass resolving power of the linear ion trap mass spectrometer prohibits the analysis of more complex samples such as proteins larger than 60 KDa or protein-protein complexes in which thousands of peptides may be generated in the proteolysis step.

To increase the dynamic range of the proteins and complexes that we can study by HD-Ex we have initiated a collaboration with Dr. Alan G. Marshall at the National High Magnetic Field Laboratory (NHMFL) site located at Florida State University (FSU). The Marshall group is widely acknowledged as the world leader in the development of Fourier transform ion cyclotron resonance mass spectrometry (FT-ICR MS). Originally developed by Marshall and Comisarow, FT-ICR MS provides the highest resolving power and mass accuracy of any mass analyzer (a 100 fold increase over our current ion trap mass spectrometer). The resolution of FT-ICR MS allows the deuterium uptake of more proteolytic peptides to be followed during the HD-Ex experiment, and the improved mass accuracy increases the confidence of all the peptide sequence assignments.

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Biographical Sketch

EDUCATION

Syracuse University 12/84 - Chemistry B.S.
University of Virginia, 4/89 - Chemistry Ph.D.
Caltech, 12/91 Biotechnology - Post-Doctoral Fellowship

PROFESSIONAL EXPERIENCE

Professor Drug Discovery, Scripps Florida, 05/04 to present
Chief Scientific Officer, ExSAR Corporation, 07/02 - 05/04
Senior Director, Basic Chemistry and Molecular Profiling Proteomics, Merck, 09/01 - 06/02
Director, Basic Chemistry and Molecular Profiling Proteomics, Merck, 05/99 – 09/01
MRL Scientific Liaison - Institute for Systems Biology, Merck, 03/01 – 06/02
Senior Research Fellow, Molecular Design and Diversity, Merck, 04/96 – 05/99
Research Fellow, Inflammation Research, Merck, 12/91-04/96
Post-Doctoral Fellow, California Institute of Technology 5/90 - 12/91
Associate Scientist, Genentech, Inc. 4/89 - 4/90
Research Assistant, University of Virginia 9/85 - 4/89

SOCIETY MEMBERSHIPS

American Society for Mass Spectrometry 1985 - present
Protein Society 1985 - present
ABRF 1996 – present

ACADEMIC AND PROFESSIONAL HONORS

Dupont Chemistry Fellow, University of Virginia 1987
Dean's Fellow, University of Virginia 1988

PUBLICATIONS

Manuscripts - 66; Book chapters - 14

Lead Identification HTS Assay Development

Claes Robert Wahlestedt, M.D., Ph.D.
Professor and Director of Pharmacogenomics

RESEARCH SUMMARY

In regard to basic research, we are pursuing several aspects of genomics and bioinformatics to better understand the nervous system. Genomic approaches have the potential to affect almost every aspect of neuroscience. Today most human genes have been identified. As a consequence thereof, we have assembled large numbers of novel genes and proteins (and potential drug targets), which now have to be associated with the appropriate pathways when possible, and then prioritized and validated for further work.

Focus is given to potential drug targets and pathways in the nervous system that are relevant to drug discovery efforts. At Scripps Florida, the most promising targets will be pursued for drug discovery in close interaction with chemistry efforts. Our experience from the pharmaceutical industry as well as academia will come into good use when establishing new programs at Scripps Florida.

We have also begun to build a platform for pharmacogenomics. Here we are attempting to assess the importance of differences in individual genetic backgrounds for disease susceptibility and drug reactions.

PROJECTS INCLUDE:

- Drug discovery relating to treatment of alcoholism and pain.
- Polymorphism in human genes of pharmaceutical relevance.
- Discovery and classification of non-coding RNA (incl. microRNA) in human.
- Functions of natural antisense transcripts in human and mouse.
- Large-scale production of siRNA for all human genes/transcripts.
- Investigation of LNA chemistry in antisense and siRNA, focus on in vivo.
- Identification of novel genes involved in senescence and apoptosis resistance.
- Neuronal differentiation mechanisms.

Biographical Sketch

EDUCATION

Doctor of Medicine in Pharmacology (PhD), 1987, University of Lund, Lund, Sweden
University Medical Degree (MD), class of 1984, University of Lund, Lund, Sweden

POSITIONS AND HONORS

Professor (formerly Founding Director and Department Chairman) Center for Genomics and Bioinformatics Karolinska Institutet, Stockholm, Sweden, 1997 - current
Adjunct Chief Scientist, RIKEN Genomic Sciences Center, Yokohama/Tokyo, Japan, 2004 - current
Director of various organizations, World-Wide Research: Pharmacia & Upjohn, Pharmacia Corp. and Pfizer Inc., Peapack, NJ, USA, 1997-2003
Founding director and head of Astra-Zeneca Research Centre Montreal (Drug Discovery in Neuroscience and Pain) Montreal, 1993-1997
djunct Professor of Biochemistry, McGill University, Montreal, 1995-1998
Adjunct Professor of Pharmacology and Therapeutics, McGill University, Montreal, 1995-2000
Assistant Professor, Division of Neurobiology, Department of Neurology and Neuroscience, Cornell University Medical College, New York, NY, 1989-1993
Docent (honorary title), University of Lund, Lund, 1990-
Postdoctoral period #1: Department of Pharmacology and Fidia-Georgetown Institute for the Neurosciences (Prof. E. Costa), Georgetown University, Washington, DC, 1987-1989
Postdoctoral period #2: Institute for Immunology (Prof. S. Nakanishi), Kyoto University, Kyoto, Japan, 1988
Clinical Instructor, Department of Psychiatry and Neurochemistry, University of Lund, 1986-1987

COMMISSIONS OF TRUST

Many review panels: (current)
KI- Genome Canada collaboration, coordinator
KI-RIKEN (Japan) collaboration, coordinator
Member, FANTOM consortium
KI-Pfizer collaboration, Director
Main organizer of Nobel Conference on:
G-Protein-Coupled Receptors (2003)
Novel Functional Aspects of RNA (2006)

COMMISSIONS OF TRUST: (current)
Genordia AB, Stockholm (co-founder)
Mitotech AB, Stockholm (co-founder)
Synaptogen Inc., Boston (co-founder)
Inovio A/S, Oslo (board member)
Santaris A/S, Copenhagen (SAB)
Genizon Inc., Montreal (SAB)
PainCeptor Inc., Montreal (SAB)

PUBLICATIONS: 149

Medicinal Chemistry

William R. Roush, Ph.D.
Executive Director of Medicinal Chemistry
Professor of Chemistry
Associate Dean, Graduate Program, Scripps Research Institute

RESEARCH SUMMARY

I arrived in Palm Beach on January 4, 2005, to begin my positions as Executive Director of Medicinal Chemistry, Professor of Chemistry, and Associate Dean of the Graduate Program at Scripps-Florida. I will move into the new building nearing completion on the FAU-Jupiter campus in early February, and will initiate my academic research program at TSRI at that time.

The first of my postdoctoral associates will arrive at TSRI-Florida in late January. Several members of my research group currently at the University of Michigan, Ann Arbor, MI, will move to TSRI-Florida in May. By the end of the summer, 2005, my research group at Scripps-Florida be 16-19 coworkers, consisting of 12 postdoctoral fellows and 4 (confirmed) to 7 (possible) TSRI graduate students. These individuals will perform research in the areas summarized below.

There are four major areas of research interest in my laboratory. One involves the synthesis of structurally and stereochemically complex, biologically active natural products by routes involving inter-, intra- and/or transannular Diels-Alder reactions. Specific targets that we are attempting to synthesize via this chemistry include superstolide A, quartromicin D, spinosyn A (and congeners) and FR182877A (among others). A second area involves the development of efficient methodology for the control of acyclic stereochemistry; our work on the allylboration and aldol reactions is representative of this area. Natural product targets we are attempting to synthesize in this area include tedanolide, apoptolidin, pectenotoxin C, amphidinol-2, amphidinolides C and E, scytophycin C, and reidispongiolide A (among others). A third area involves the synthesis of polyhydroxylated natural products, specifically oligosaccharide containing natural products. Durhamycin A, landomycin A and angelmicin B are major targets of these efforts. The final area concerns the design and synthesis of inhibitors of the cysteine proteases isolated from two important tropical parasites: cruzain from Trypanosoma cruzi (e.g., the causative agent of Chagas' disease) and falcipain from Plasmodium species (e.g., malaria). This program involves a collaboration with a group of molecular modelers, parasitologists (Jim McKerrow, Phil Rosenthal), protein biochemists (Charles Craik), and X-ray crystallographers (Linda Brinen) at the University of California at San Francisco. We are also involved in two other research programs focusing on the developoment of a pro-apoptotic drug-like molecules for treatment of Lupus and other autoimmune diseases (collaboration with Prof. Gary Glick of the University of Michigan). The other one involves the design and synthesis of potential anti-HIV agents (collaboration with Dr. Vassil Georgiev of the National Institute of Allergy and Infectious Diseases).

I list my research support on a separate page (in the usual NIH form). I am currently finalizing all of the paperwork to transfer three of my NIH grants to TSRI-Florida effective June 1, 2005. Those that will transfer are: AI 35709; GM 26782; and GM 38436. The dollar amounts are listed are for the current grant year only, and are direct cost dollars only; indirect costs will be paid to TSRI-Florida by the NIH agencies on top of the direct cost dollars. The competitive renewal application of NIH Grant GM 38907 received a 12.1 percentile rating. In normal years, this grant would be funded without question. However, owing to current budget problems at the NIH, a decision to re-fund this grant has not yet been made. If funded, it will begin at TSRI-Florida in June, 2005.

CURRENT RESEARCH IN PROGRESS

1. Total synthesis of stereochemically complex via asymmetric Diels-Alder technology: quartromicin, spinosyn A, cochleamycin A, FR182877, and superstolide A.
2. Total synthesis of propionate derived natural products via asymmetric crotylboration, allylsilylation, and aldol technology: tedanolide, scytophycin C, apoptolidin, pectenotoxin II and amphidinol 3.
3. Total synthesis of polyhydroxylated natural products: aureolic acid antibiotics (mithramycin), ziricin, landomycin A, and angelmicin B.
4. Design and synthesis of cysteine protease inhibitors: Trypanosoma cruzi cysteine protease (cruzain; Chagas' disease), and Plasmodium falciparum cysteine protease (falcipain; malaria).
5. Development of new synthetic methodology to support the studies defined in 1-4.

Biographical Sketch

EDUCATION

B. S., University of California, Los Angeles, 1974
Ph. D., Harvard University, 1977
Postdoctoral Fellow, Harvard University, 1977-78

OTHER APPOINTMENTS

BioInformation Associates, Principal and Consultant 1981-2001
Genzyme Corporation, Consultant 1983-97
Genzyme Corporation, Pharmaceuticals Division Board Member 1994-97
NIH Medicinal Chemistry Study Section, Ad Hoc Member 1984-88
Special NIH Study Sections, Ad Hoc Member 1984-88
Chemtracts, Expert Analyst 1986-1999
Secretary-Treasurer, ACS Division of Organic Chemistry 1990-93
Chairman, ACS Division of Organic Chemistry 1995
Alternate Councilor, ACS Division of Organic Chemistry 1999-02
NIH Medicinal Chemistry Study Section, Member 1990-93
Chairman, NIH Medicinal Chemistry Study Section 1993-95
NIGMS Council, Ad-Hoc Member 1998
Editorial Board, Organic Reactions 1991-2002
Board of Directors, Organic Reactions 1995-present
Eli Lilly and Company, Consultant 1991-oresent
Editorial Board, Encyclopedia of Reagents for Organic Synthesis 1992-2002
Editorial Board, Organic Syntheses 1993-2002
ArQule, Scientific Advisory Board Member 1994-2003
Consultant, NeXstar Pharmaceuticals, Inc. 1994-98
Organizing Committee, NSF Workshop on
Organic Synthesis and Natural Products Chemistry 1995-97
Consulting Editorial Board, Tetrahedron 1996-2002
Consultant, Parke Davis 1998-2001
Consultant, Pfizer 2001-present
Associate Editor, Journal of the American Chemical Society 1999-present
Editorial Advisory Board, Organic Letters 1999-present
Steering Committee, Challenges for the Chemical Sciences in the
21st Century, National Research Council 2000-02
Invenux, Inc., Scientific Advisory Board Member 2001-03

HONORS AND AWARDS

B.S. in Chemistry, Summa Cum Laude 1974
Phi Beta Kappa 1974
Merck Faculty Development Award 1981
Eli Lilly Grantee 1981-83
Roger and Georges Firmenich Career Development Chair in Natural Products Chemistry (MIT) 1981-84
Fellow of the Alfred P. Sloan Foundation, 1982-86
Alan R. Day Award of the Philadelphia Organic Chemist's Club, 1992
Arthur C. Cope Scholar Award, American Chemical Society, 1994
ACS Akron Section Award, 1996
Merit Award, National Institute of General Medical Sciences, 1998
Distinguished Faculty Achievement Award, University of Michigan, 1999
Paul G. Gassman Distinguished Service Award,
ACS Division of Organic Chemistry, 2002
ACS Ernest Guenther Award in the Chemistry of Natural Products, 2004

PUBLICATIONS: 223

NAMED LECTURESHIPS: 34

Medicinal Chemistry

Chris Liang, Ph. D.
Associate Director, Medicinal Chemistry

RESEARCH SUMMARY

Objectives: To discover protein kinase inhibitors as therapeutics for the treatment of human diseases such as cancer, arthritis, asthma, diabetic retinopathy, age-related macular degeneration, restenosis, and atherosclerosis.

Background: Protein kinases are a class of enzymes that catalyze the transfer of the g-phosphate from ATP to protein substrates. They play critical roles in signal transduction for a number of cellular functions. In particular, they regulate most of the "hallmarks" of cancer: cell proliferation, cell survival, cell motility/metastasis, cell cycle/division, and angiogenesis. They are also implicated in inflammatory diseases such as arthritis and asthma. The approval of Gleevec for CML (chronic myelogenous leukemia) and GIST (gastro intestino stroma tumor), and Avatin for NSCLC (non-small cell lung cancer) validated protein kinase inhibitors/antagonists as effective, non-cytotoxic anticancer agents. They provide new hope and paradigms in the long fight against cancer. There is also strong later stage clinical data suggesting that p38a MAP kinase inhibitors could be effective anti-inflammatory agents. For these reasons, protein kinases are being hotly pursued as valuable therapeutic targets and it was estimated that they constitute about 25% of all current pharmaceutical research.

Strategy: As we are building the drug discovery infrastructure in Palm Beach County, our strategy to jump start drug discovery is to improve pharmaceutical properties of known advanced protein kinase inhibitors using methods of medicinal chemistry. This strategy allows us to by-pass the lengthy drug target validation and the need of high throughput screening that is being built up.

We have studies all protein kinase inhibitors in the market, in clinical trials, or those have gone through some clinical trials or extensive pre-clinical development. It was found that one of the major hurdles that prevent many potent and selective protein kinase inhibitors from being a successful drug is the poor solubility of their chemical scaffold. Currently, the most common practice in this field is to introduce an ionizable group (amine or acid) to improve solubility. But it is unsatisfactory since it introduces new problems to the inhibitors (e.g. either increased toxicity or unacceptable protein binding), leading to the failure of many such compounds. We have developed hypothesis that may solve the solubility problem without introducing new ones. Based on the hypothesis, novel protein kinase inhibitors from different chemical scaffolds were designed. These scaffolds cover most of the protein kinase inhibitors that have advanced to clinical trials or reached market approval. The designed inhibitors are targeted against the well-validated kinase targets such as VEGFR, PDGFR, FGFR, Kit, EGFR, Her2, and p38a. Our proprietary design is aimed to further improve the drug properties of those advanced protein kinase inhibitors, thereby enabling us to develop safer and/or more effective therapeutics.

Status: Chemists in my group have synthesized nearly 200 potential drug candidates over the past half year. Most of the compounds have been tested in enzymatic and cellular assays. Their drug properties are also being evaluated. In two projects, we have found compounds that possess better in vitro properties than the best known competitors. Currently, they are undergoing further in vivo tests.

Biographical Sketch

EDUCATION

Ph. D., Princeton University (Prof. Leland C. Allen), 1985 – 1989
M.A., Princeton University, 1984 – 1985
GuangZhou English Language Center, 1983 – 1984
B.S., Wuhan University, 1979 – 1983
Short courses/training
- "Toxicology", Pharmacia continuing education class
- "Pharmacology for Chemists", ACS short course
- "Drug Metabolism", Anthony Y.H. Lu Institute
- "Champion Leadership and Team Building", The Lambton Group
- "From the Laboratory to Leadership", The Leadership Edge
- "Dynamic Presentations in a Scientific Business Setting", Deb Kaufmann & Associates

ACCOMPLISHMENTS/EXPERIENCES

SUGEN, Inc./Pharmacia/Pfizer, 1996 – 2003
Accelrys, Inc. (formerly Biosym/MSI), 1991 – 1996
Scientist, Senior Scientist
Brookhaven National Lab (Dr. Marshall Newton), 1990 – 1991
University of Georgia (Prof. Henry "Fritz" Schaefer III), 1989 – 1990

HONORS

Associate Fellow, Pharmacia Corp., 2003
John von Neumann Fellowship of Princeton University, 1986 - 1987
Fellowship of the Ministry of Education, P. R. of China, 1984 –1985

PUBLISHED PATENT APPLICATIONS: 13

SELECTED SCIENTIFIC PRESENTATIONS: 9

PUBLICATIONS: 32

TAB D

Bioscience Stakeholders Meeting Minutes

Business Development Board
PALM BEACH COUNTY'S BUSINESS RESOURCE

BIOSCIENCE STAKEHOLDERS MEETING

June 29, 2005

West Palm Beach Marriott

The purpose of the Bioscience Stakeholders Meeting, "Connecting the Dots" is to analyze and establish overlapping principles for the various components of the bioscience industry cluster, reach agreement on key next steps and identify potential collaborative efforts and key measures of success.

Introductions by BDB President Kelly Smallridge, BDB Board Chairman Tom Lynch, Commissioner Tony Masilotti, and moderator Don Upton.

Panel 1 - Overview of Palm Beach County Biotechnology Park

This panel highlighted best practices in the development of research parks, and provided and overview of Palm Beach County's efforts.

Panelists:

- Shannon LaRocque, PE, Scripps Program Manager, PBC
- Patricia Ardigo, Director of Life Sciences Group, CBRE

Shannon LaRocque described the key benefits of Palm Beach County's collaboration with Scripps which includes being a catalyst for a tremendous economic development engine, the expansion of our current job base to include high tech jobs, advanced scientific based education for high school and college (students and teachers) and the local availability of cutting edge healthcare.

The Scripps facility is on 103 acres of the 1,919 acre park. The infrastructure planning is complete, and construction is due to begin in September 2005 and be complete by July 2007. It includes 44,000 square feet for administration, and 320,000 square feet for research and development (total - 364, 000 square feet)

The rest of the park will include over 8.5 million square feet of research and development space, 430,000 square feet of retail, and 2,000 residential/workforce units. It is a 30 year phased project, and they expect to have 535 acres developed in the next 10 years.

Key components of the park include:

Research and development – 519 acres
Wetlands and lakes – 500 acres
Pedestrian and multi-use trail systems, and public transportation – 380 acres
Residential development – 148 acres
Schools/Universities - 108 acres
Transportation - 108 acres
Commercial development – 50 acres
Research Hospital – 27 acres

The goals for Palm Beach County for this development include the following:
An economically viable bioscience cluster
A sustainable community that allows live/work/play in its boundaries
Educational advancements
An environmentally friendly development
Improved healthcare

Patricia Ardigo described research parks as a place of cutting edge innovation, national and international collaboration and partnerships, global connectivity, quality education, skilled workforce, and a quality environment. She stated that there are three key components of building this kind of successful research park which include a **research institute anchor, a clinical medical hospital, and on site universities**.

As the anchor for Palm Beach County's research park, Scripps needs a university presence to gain access to grants. Universities, in turn, need a research anchor to provide employment opportunities for faculty and staff, to enjoy economic returns for endowment funds, to stimulate patent licensing revenue, and foster technology transfer. Companies want to be located in this collaborative environment where they can gain access to students for employment, collaborate with universities and the medical center to share use of specialty rooms, libraries, vivariums, & special equipment, and have a direct line to local academia.

Having a clinical hospital is also key in a research parks success. The future of research is translational medicine – "from bench to bedside." With the existing patient base and research facilities in the Southeast Florida region, the Palm Beach County research park is a prime location for such an institution.

Other local benefits of a research park include:

Increased overall tax contribution

New job creation/workforce enhancement

New neighborhood based retail

New housing/higher residential value on existing homes

Strengthened community quality of life

Donation of equipment

Contributions to civic projects

Supported educational issues – seminars

Statewide benefits:

Improved state image for research

Development of research corridor, from Port St. Lucie to Miami

Higher development standards

More effective marketing

Stimulation of other park development

Potential for creating a special office of Bioscience specifically geared toward creating economic development incentives that are attractive to bioscience companies

Potential for creating an innovation fund

New job creation

Questions:

What will make Palm Beach County's research park successful?

There are over 42 states across the nation competing to capture the bioscience industry. The panel suggested that in order to be successful, three primary issues must be addressed:

- State and local incentives must equal those of other states
- The Scripps facility needs to be built
- A commitment to build new collaborations across companies and municipalities

What kind of collaborative effort do you need, and how do you measure it?

Palm Beach County's top competitors include Boston, San Francisco, San Diego, New York and Maryland. In the last six months, several new parks have opened across the country.

Aberdeen - 250 acres

Arizona state - 2 million square feet

Case Western - 2 million square feet

John Hopkins - 2 million square feet

Palm Beach County has two primary advantages. The National Institute for Health is concerned that with all of the money going towards research, there needs to be a patient base for clinical trials; which we have in our area. In addition, Palm Beach County is developing a park that will include everything scientists need to live where they work: a key advantage in an industry where discovery is often based on long hours of work and spontaneous interaction with other scientists.

Because by third grade children have decided what their place is in relation to science, and for every 100 children only 0.8 will choose science and discovery, how can the research park assist in improving these statistics?

This was an important issue to the panel, as 10% of entire population in Florida is in the K-12 education system, and companies looking for new sites often request 4th grade FCAT scores to help them determine their next location. In a research park in Connecticut, a collaboration formed and funded a bioscience bus; a greyhound bus that was converted into a laboratory. In addition to bolstering existing educational facilities, that is an example of one way to get elementary aged children interested in the field of science.

Panel 2 – Local biotech companies discuss critical components needed to develop cluster in Palm Beach County and the State of Florida

This panel talked about the bioscience market place that exits in Palm Beach County, the depth and breadth of the cluster, and the market place that we anticipate.

- Ken Kirby, President and CEO, Transdermal technologies
- Dr. A. Donny Strosberg, Professor, Scripps - Florida
- Mark Emalfarb, President, Dyadic Industries
- Rhys Williams, CEO and co-Founder, Tequesta Marine Biosciences

Ken Kirby described the bioscience industry in Florida, which consists of universities, researchers and service providers, as nascent. While there are local companies working in the bioscience field, the support system for supplies, chemicals, manufacturing, and contract research services just aren't available. Many local companies go overseas for these support services.

Dr. Strosberg stated that it takes a city or county to build a biotech company, and that Palm Beach County is starting with many assets; Human assets with the many venture capitalists who have second homes here as well as retirees and people who have relocated here for lifestyle rather than career reasons, and environmental assets in our climate and proximity to the coast. Palm Beach County has also secured a sizeable piece of property for the park, and has a head start on workforce talent. Scripps had no problem finding local talent, and was lured here largely by the availability of space. The key to success, he suggests, is the development of a bio-incubator.

Mark Emalfarb stated that building incubator lab space is the most important task. The bioscience industry is giving Florida an opportunity to advance its economy in a time when call centers are going overseas and large companies are leaving. A good target market is the European community; they don't want to locate on the west coast because of the time difference, and they prefer a warm climate. Scripps is just the beginning. When investment analysts look at a new site, they are going to go somewhere like San Diego where they can see 20 companies, rather than just two or three. Palm Beach County also needs to develop more incentives for small companies. Many local companies have gone to different parts of the Country and the globe to set up business, because of the workforce talent and incentives, and local and state

government could help reverse the trend. Access to more venture capital is also important, particularly the early-stage "angel investor" category which typically comes from local community.

Rhys Williams talked about the experiences of his year-old company here in South Florida; Tequesta Marine Biosciences. He stated that because the industry is so geographically disjointed, it has been difficult to find local resources to meet his needs. While this has created a unique challenge, having to reach out to advisors from Coral Gables to Gainesville has also provided the opportunity for his company to build strong, productive relationships within the State. At this point, support capacities vary by area. His company just received a $100,000 award which requires wetlab space that they don't have, so they have had to partner with another organization. While there is good expertise in legal and accounting areas, new companies would benefit from more flexibility in billing arrangements, and a strong commitment to see new companies survive. Also, there are few biotech technical advisors, requiring companies to go to other states for help. Having local resources is also key in promoting the "Water Cooler" effect; discoveries that are made and resources that are shared as a result of proximity. He urged Palm Beach County to think about how they can encourage existing entrepreneurial and management talent, both local and relocated, to enter into the bioscience industry.

Questions

<u>In the next 3 to 5 years, where are we going with the bioscience cluster?</u>

The panel responded that action is needed in three to five days rather than years: time is the enemy in the bioscience industry. However, all agreed that the Scripps building, clinic and university presence should be in place during that timeframe. Most importantly, an incubator should be in place. The panel also talked about the following resources and activities:

- Hotspots where people come together around specific clinical research perspectives, similar to the Center of Excellence concept.
- Wet lab incubators
- Network of highly specialized, local technical expertise (former FDA examiners, retired CEO's, etc)
- Tier 1 venture capital presence
- Greater availability of pre-seed and seed capital
- Collaboratives with access to cut rates/flexible for legal, accounting and regulatory consulting work
- Need for universities to be better informed regarding what kinds of patents and patent protection are most important for bio-tech firms to be able to in-license and commercialize.
- Specialized business loan programs
- List of local and regional services and suppliers
- Educated media to convey accurate expectations for biotech industry
- Incentive systems that target small businesses, and allow for failure
- Regionally-oriented marketing around the growth that will occur from Fort Pierce to Monroe County.

How important is it to be in the park?

The panel agreed that it is essential that they locate close to where they might be a critical mass. Companies want to hire as needed, and few companies can afford on their own an up-to-date library, analyzer for cell based essays, and all the heavy duty instruments they may need. In addition, people in the bioscience industry work long hours. They are incentivised by having shares in their company, and they rely on a safe and appealing environment where they can live close to where they work.

How can the legal community help?

Have antennae up for opportunities for start up companies. Understand their needs in terms of licensing, flexible billing, introductions to potential advisors, board members, investors, etc.

How can PBC & State legislature be asked to incentivise more, when they feel they have subsidized the bioscience industry enough?

The panel suggested another meeting just to talk about incentives. Right now, the Business Development Board is judged by how many large companies and jobs they bring in, and perhaps that can be expanded so that smaller companies are considered. The panel suggested hosting another meeting just to talk about incentives, and to talk about them in terms of investing in the future; as it is likely that local government and its citizens will recoup their investment and get a substantial return. The question is when. Scripps is not an industry in itself. Local companies are now raising millions of dollars here, and provide proof that the investment in Scripps is already providing some return.

Panel 3 – State University Partnership and its role in the development of the Bioscience Cluster

This panel talked about the biosciences strategies employed by their institutions.

- Winfred Phillips, Director of Research, University of Florida
- Dr. Larry Lemanski, First Vice President of Research and Graduate studies, Florida Atlantic University
- Dr. Gary S. Margules, Assistant Provost, Technology Transfer and Industry Research, University of Miami
- Dr. Debra Mosca, Senior Director, Business Development, Scripps
- Dr. Deborah Mosca, Senior Director, Business Development, Scripps

Dr. Deborah Mosca gave an overview of the activities and contributions that the 120 employees and 15 faculty members at Scripps are making in the following areas:

Biomedical research: cancer biology, immune disorders, infectious disease, metabolism/ cardiovascular, neurobiology

Advance Technologies: HT cell biology, functional genomics, HT genotyping, proteomics, engineering, informatics, drug discovery, lead discovery, medicinal chemistry, HT X-ray crystallography, drug metabolism and pharmacokinetics

Scripps has completed one scientific collaboration, and has eight more in progress. They have reached out to the business community to promote this work; attending 39 meetings, 66 community events, 41 educational and 26 scientific events. They are facilitating the Scripps/Oxford International Biotechnology conference to be held in November at the Breakers Hotel in Palm Beach (November 13-15) where talks on cutting-edge science will be combined with discussion from leaders in the biotech world. One key panel on "Building the Community: economic and non-economic indicators" includes Ross DeVol, Director Regional Economics at the Milken Foundation. To date, Scripps has raised money from venture capitalists, recruiting firms, high-tech companies, and more to support the conference.

In terms of economic development, Scripps attended the Metro Orlando Economic Development Commission's annual meeting this year, as well as the Bio 2005 conference in Philadelphia. They are partnering with Governor Bush and Enterprise Florida as a part of both Team Florida Germany and the Life Science Track Switzerland initiatives.

Scripps intends to continue to employ a variety of strategies to help build local collaboration:

- Host Scientific Seminar Series with prominent speakers
- Establish Peer-to-Peer Collaborations driven by scientists, which includes a master agreement with Florida universities (material transfer agreement, confidential disclosure agreement)
- Institute an open access program where Scripps resources are available to Florida institutions based on a scientific, merit-based review of the work

Win Phillips talked about the 47 million dollars in research awards that the University of Florida received in 2003-04. 60% of those funds, or $28 million, went to biomedical research, representing a significant portion of the states intellectual and economic commitment to building the bioscience industry in Florida.

The University of Florida is the 5th largest university in the nation, with extensive health science, agriculture and engineering programs. In April, 285 thousand square feet was built on the university's campus for bioscience research. This is in addition to Genetics and Cancer Research building, the McKnight Brain Institute, and the Center of Excellence for Regenerative Health which just received 4 million dollars to encourage minority participation in the program. Through these efforts, the University of Florida has built a nationally recognized office of technical licensing that executed 64 license agreements in 2004; ranking 10th in size nationally. The University of Florida also has initiated bioscience collaborations which include a national high magnetic field laboratory and the Sid Martin Biotechnology development incubator which is highly successful and always fully occupied.

Dr. Larry Lemanski talked about Florida Atlantic University being the 'new kid on the block', even though the university has grown from receiving $27 million to over $50 million in research funding in the last 4 years. At this time, they are working on securing funding to expand their Jupiter site

to continue to accommodate Scripps growth, and they anticipate more joint appointments where Scripps employees hold faculty level positions at FAU. The future is bright, as two recent FAU graduates chose to stay in the area and do post doctoral fellowships at Scripps rather than move out of the area, limiting what has been described as a brain-drain.

Some joint research efforts are being planned with Scripps including projects related to cancer, heart disease, Alzheimer's, neurology, and drug discovery. Florida Atlantic University has just received nine million dollars in Federal Initiative Grants, which will provide three million dollars a year for the next three years.

The Synthesis of new medicines (within Center of Excellence/COE) program has produced the following spin-out companies:

- Tequesta Marine Biosciences, Inc. - K.C. Nicolaou and R. Kerr – which is focused on producing medicines from the sea.
- Custom Synthesis, Inc. – S. Lepore

Florida Atlantic University is a part of the Scripps Working Groups; planning how to promote university interaction in the industry through a Nobel Laureate lecture series. One such meeting included Jim Watson, who discovered the molecular structure of DNA. The University Consortium that has formed now has a white paper, and is looking to get started with building an incubator.

Other potential areas for collaboration include:

- Education and workforce training
- Economic Development and Capital
- Infrastructure & facilities
- Research/Development and technology transfer
- Education and outreach

Dr. Gary Margules of UM talked about the components of a strong, university based bioscience effort as including strong basic science, clinical research, translational research and "home grown" technologies. The University of Miami is the 2nd or 3rd largest hospital in the United States in terms of beds, which is key to providing translational research and securing grant money.

The University of Miami researches cell therapies, cancer, ophthalmology, molecular pathology, and paralysis. They measure their success based on the amount of research funding they receive, licensing income, translation, spin-outs. They make sure they have internal agility, and that their awareness and flexibility matches the potential for external change in the industry.

At the office of technology transfer (OTT) directors quarterly meetings, the following projects are helping build collaboration among the universities:

- The Technology Bundling project: includes 12 universities

- The virtual incubator that serves as a clearinghouse for universities: this project came out of the South Florida BioScience Consortium, was modeled after an incubator in Madrid, and was funded by the National Science Foundation for $600,000.
- SCCC & BPEI in Palm Beach
- The Coulter Center for Translational Research
- The CGMP Human Cell Processing Facility
- The Bascom Palmer Eye Institute
- NIH Cell Distribution Center

Questions:

What are the common measures of success or score-card indices that should be considered in this industry?

The consensus included the following:

- Research funding
- Licensing income, revenue streams
- Translational benefits
- Company spin-offs
- Collaboration
- Proportion of staff talent recruited locally

Panel 4 – Programs Created by our Local Educational Institutions

This panel talked about the programs created by our local educational institutions to better prepare students for jobs in the bioscience cluster.

- Lynn Slygh, Head of Biotechnology Academy at Seminole Ridge High School – Palm Beach County School District
- Dr. Dennis Gallon, President – Palm Beach Community College
- Charles Halliday, President – New England Tech & Florida Culinary Institute
- Dr. Larry Lemanski, First Vice President of Research and Graduate studies, Florida Atlantic University

Ms. Slygh described the local Seminole Ridge charter High School and their biotech academy which introduces students to appropriate subjects and technologies to prepare them for continuing education and a career in the bioscience field. There are many benefits to the local community and local companies from developing such programs, and it is an important part of retention of local talent. The school is partnering with companies in the field; establishing job-shadowing and internship programs, and drawing on local expertise for lecturing.

Dr. Gallon described the community college's new math and science institute which was established two years ago prior to the Scripps deal being formalized. He emphasized PBCC's emphasis on workforce education, and noted statistics showing 4-year universities regard graduates of community colleges as their best-performing students. The college is implementing a Biotech associates degree beginning in the fall of 2005, and is currently involved in a search for lead faculty members. They have established this program based on research from the facilities surrounding and serving the Scripps California facility where they visited to establish what the needs of 2-year college educations includes and how they contribute to the biotech field and the local communities.

Dr. Halliday described the value to the local community of New England Tech, because of its sole focus on skill development for the local trades and industry which will serve the bioscience community. From the air-conditioning requirements of research facilities to the technical demands of a highly skilled and educated workforce, the culinary institute provides a link to these support services.

Dr. Lemanski discussed the medical program run at FAU in Boca Raton as an affiliate with University of Miami, and the development of a full program with local graduates in the near future. FAU also has a center of excellence in biomedical and marine biotechnology which adds greatly to the local community and economy. The school has a center for molecular biology and biotechnology which will enable significant collaborations with Scripps, the bio-incubator and the biotech cluster in general. FAU's Office of Technology Transfer and Research Parks is extensively involved in support of local collaboration and research, and can serve as a resource as the cluster develops in Palm Beach County and the region.

Panel 5 – Attracting Venture Capital to Florida for the Bioscience Cluster

This panel addressed the challenges and some successes in attracting local venture capital both locally and in other bioscience clusters around the country.

- Ravi M. Ugale – Partner – Crossbow Ventures
- Leslie J. Crowland, Partner – Edwards & Angell, LLP
- Mike Mitrione, Esq., Shareholder – Gunster, Yoakley & Stewart, P.A.
- Louis Laubscher, Senior Director of Capital Development – Enterprise Florida.

This session was interactive with speakers responding to and adding to each others ideas. It was noted by Mr. Ugale that over 90% of venture capital for local bioscience research flows into the region from outside of Florida, and that more local venture funding is needed. With the significant wealth that is present in Palm Beach county each winter, this seems like a resource that is untapped. Particularly early-stage or "angel network" funding is needed to get research projects moving and show some results to attract the institutional investors. More bioscience venture forums would assist in generating interest, and bringing potential investors together. One critical ingredient of a successful cluster is a melting pot of cultures, people and ideas that inspire one another. This is largely present already in the local community. The Mayo Clinic in Jacksonville has been responsible for the creation of up to 12,000 jobs in that region, including several spin-off companies that add greatly to the economy.

A successful business model is needed for profit-based bio incubators. There are a number of successful examples nationally, and the best should be adapted for this business climate. Forums to bring people together, as well as investor networks are an important part of this plan. Media attention is another important ingredient, and Enterprise Florida coordinates a lot of media interest in the industry throughout Florida.

Venture capital is going to be critical. Angel network support is important early-on and frequently relies on friends, family and local supporters. There should also be a substantial increase in the amount of local Florida funding that can support a variety of incubators. California and North Carolina have both used state pension funds to invest in local bioscience industry, and this is something the State of Florida should consider. University endowments are another source of needed capital to support the industry start-ups.

Questions:

What role should the State play in supporting venture capital?

Enterprise Florida is working on models for the State to consider for investing venture capital in this industry. Tax credits in various forms are used by 19 states in the USA. North Carolina and California have been particularly successful in investing in bioscience through tax credits and pension scheme funding. However, the State should not be in the role of trying to pick winners. It should instead rely on the profit motive and provide tax credits with a focus on productivity and solutions that are translational and can be demonstrated to provide a measurable benefit in the industry. A competitive grant strategy is another model that can be used by the State, with California having been the most successful at this. They have combined federal and local sources of funding, including pension funds and university endowments.

Working Lunch Session 1 – Recruiting Bioscience Companies

This was a question and answer session, with contributions by all of the panelists.

- John Ray, Vice President Life Sciences – Enterprise Florida
- Gary Hines, Sr, VP of Business Recruitment – Business Development Board of Palm Beach County
- Al Zucaro, Chariman – World Trade Center

What are the protocols in place by different agencies to support recruitment of bioscience companies to this region?

The BDB serves as the local recruitment agency, and works closely with the World Trade Center and Enterprise Florida. The three bodies determine the type of opportunity presented, and coordinate to avoid overlapping initiatives such as conference attendance, marketing etc.

What is the marketing message for this region?

Enterprise Florida's campaign is a broad national effort that includes print and broadcast media, NPR radio, email programs and attendance at critical conferences and seminars such as in Philadelphia this year. The BDB coordinates closely on the effort as well, working with municipal

governments and chambers of commerce. They also maintain a database of local property availability to answer questions from potential investors or relocating companies. At the global and national level, Palm Beach is still known as a recreational and retirement destination. This must be changed through a coordinated marketing and outreach effort to bring bioscience, research and innovation into the picture that represents the County and the region.

Upcoming bioscience conferences will help to spread this message. They include:

- Bio Florida conference, Delray Beach Marriot, October 24, 25
- Scripps/Oxford International Biotechnology conference, Breakers Hotel in Palm Beach November 13-15.

What lessons were learned by the Florida delegation at the Biotech Industry Organization conference in Philadelphia in 2005?

Florida and the South Florida region needs to come together better to present a unified voice, as through Team Florida. This will group resources and allow a higher level of participation, particularly given the high costs of such events. In future, Palm Beach will join the Florida pavilion rather than having a stand-alone booth, and will focus more on partnering. The Governor's support was critical in meeting with some of the most influential companies and potential investors. One of the threats that exists, especially compared to foreign country competitors, include the closing of borders and difficulties in foreigners obtaining visas.

How should we be measuring success in recruiting bioscience companies?

Success is measured by increasing the diversity of the types of companies recruited here, by the number of technology innovations they develop, and by the amount of local venture capital generated. While the BDB has somewhat of a focus on recruiting larger companies, the majority of investment occurs in companies of fewer than 25 people.

What interest has been shown by European companies?

Currency exchange currently makes the USA a highly competitive market for western Europe, and Florida is high on their list due to time zone, climate and available land. German and British companies lead the investment here, with French and Italian investors being runners up. This is and will continue to be a major market for business recruiters here. World Trade Center will visit Shanghai later in 2005 to identify opportunities with Far East companies.

Working Lunch Session 2 – Advocacy for the Bioscience Cluster

- Diana Robinson, President – Bio Florida

Bio Florida's mission as a statewide trade association is to grow and promote the bioscience industry throughout Florida. The agency is divided into four chapters with the Southeast Chapter representing Palm Beach County and the Southeast Florida region. Bio Florida is a reflection of the industry itself and is organized around four subgroups – agriculture, drugs, research and healthcare centers, and laboratories (the latter being the group that includes companies like Scripps.)

The benefits of this industry to the local economy are large and clear – its average wages are as much as $20,000 above average for the area, and it impacts every sector of the economy. The industry helps improve education and retain quality jobs. It is involved in developing cures and treating diseases which provides both local and global benefit. Bio Florida has a new communication initiative which further describes these benefits in an attempt to get more individuals and corporations involved in the industry.

The title of their October 24-25 conference in Delray Beach is "Cornerstone to Capstone".

Working Lunch Session 3 – Addressing the Workforce Programs

- Doug Saenz, Biotech Job Developer – Workforce Alliance, Inc.
- Susan Pareigis, Director – Agency for Workforce Innovation

Mr. Saenz described the joint program between Workforce Alliance and Florida Atlantic University to develop skills in the bioscience arena, which is funded by a three-year grant from the Department of Labor. The program, which currently has 110 students, includes a one-year biotech training course for students who have completed a BS degree.

The agency's other programs allow retraining only in fields contained in a state government "occupation and demand" list which currently does not include biotech jobs, limiting their effectiveness in training for bioscience. However these lists are always subject to change.

Ms. Pareigis described the workforce development programs of her agency as targeting "better jobs – better wages." The agency promotes the value of education – one of their programs is entitled "high school – high wages", and they bring these programs to local schools in this region. They are also involved with unemployment compensation programs.

The agency for Workforce Innovation is involved in a twice-yearly workforce estimating conference to project employment in growing industries and ensure that appropriate training is available throughout the community. Their office of early learning includes childcare programs and a voluntary pre-kindergarten program. They will provide programs for all four year old children in the state. Early learning programs all have an emphasis on math and science education since the training of the labor force in that area has always been of importance to industry considering a move to a new community.

Questions:

<u>How should the region deal with workforce challenges following Scripps?</u>

Mr. Saenz described the joint program between Workforce Alliance and Florida Atlantic University to develop skills in the bioscience arena, which is funded by a three-year grant from the Department of Labor. The program targets 110 professionals laid off from declining industries with BS degrees in math or the sciences. These professionals will go through a one year post baccalaureate Biotechnology Training Certificate Program at FAU, with distance learning conducted for Treasure Coast residents at Indian River Community College.

The agency's other programs allow retraining only in fields contained in a state government "occupation in demand" list which currently does not include biotech jobs, limiting their effectiveness in training for bioscience. However, Workforce Alliance is actively pursuing changes to this list.

At the state level, the Agency for Workforce Innovation has access to the funding necessary to support local level education and training programs, but needs the cooperation of local institutions to identify those needs and secure some funding as well. The agency wants to be proactive, and has identified several funding streams for the benefit of local education programs. One of their primary desires is partnerships with companies and their top management to help identify the right programs and their content to meet industry demand. The state is committed to including these partners in the successful allocation of grant monies.

MEETING DEBRIEFING

The meeting's facilitator, Don Upton with Fairfield Index, solicited ideas for the agenda of the next Bioscience Stakeholders meeting (August 24th) which includes:

Broaden the scale to include state and regional interests and partners

Identify scorecard categories and indexes to measure success

Determine how various Economic Development Organizations can partner and collaborate

Discuss real estate impacts

Develop strategies to promote venture capital

Identify new incentives

Reach out to major corporations (e.g. IBM) where there may be opportunities for a substantial initial investment.

Specific requests for follow ups from the meeting included:

A list of attendees, companies and context

Addresses and emails for all attendees

A web link to a virtual incubator

A marketing strategy for the region

Key dates for upcoming follow-up meetings include:

July 15 – Regional Economic development organizations – location to be announced

August 24 – 2nd Bioscience Stakeholders meeting – WPB Marriot 8am - noon

October 24-25 – Bio Florida conference - Delray Beach Marriot

November 9-10 – Palm Beach Economic Summit – Palm Beach Convention Center

November 13-15 – Scripps/Oxford International Biotechnology conference – Breakers Hotel in Palm Beach

Web resource: www.bdb.org

Special thanks to the Economic Development Research Institute (EDRI) for providing data and information towards the development of this report.

Enterprise Florida

The Importance of Free Trade Agreements on the Economic Development of Florida

eflorida.com

Enterprise Florida's Mission:

To diversify Florida's economy and create better-paying jobs for its citizens by supporting, attracting and helping to create businesses in innovative, high-growth industries.

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FREE TRADE AGREEMENTS AND FLORIDA

- Florida enjoys a leading role in global business activities
  - Merchandise trade
  - Knowledge-based trade
  - Global visitors
  - Foreign direct investment
- Florida is the premier US state for trade, visitors and investment activities with the growing Latin American and Caribbean marketplace
  - 500 million customers with a combined GDP of $2 trillion
  - Free trade agreements (FTAs) strengthen the "buy Florida" brand of the State in this growing marketplace

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FREE TRADE AGREEMENTS AND FLORIDA (cont.)

- FTAs are **comprehensive** market-opening agreements that steadily lower trade, investment and services barriers
  - Transparent
  - Rules based
  - Dispute settlement mechanisms
  - "National treatment" for FDI
  - Labor and environmental rules
- FTAs increase consumer choices and purchasing power, while decreasing the transaction costs of business expansion in Florida
  - Thereby enhancing **net** job creation through growing trade, services, investment and visitor flows
  - The US-DR-CAFTA and future FTAA are critical components of statewide strategic plan for economic development

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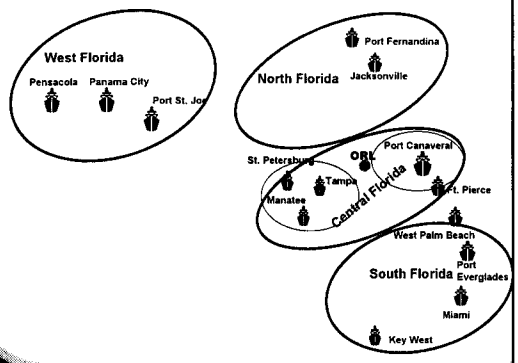
FTAs HAVE STATEWIDE ECONOMIC IMPACTS



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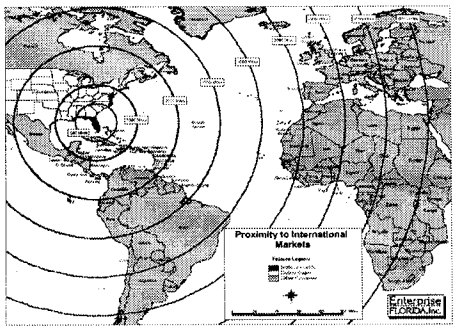
FLORIDA AT THE CENTER OF HEMISPHERIC FTAs



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Enterprise Florida

IMPACT OF DR-CAFTA TREATY ON FLORIDA

IMPACT OF INTERNATIONAL TRADE IN FLORIDA

- More than 580,000 jobs in Florida depend on international trade
- 2004 Florida trade surpassed $81 Billion and expanding fast
- Florida exported more than 37.5 Billion ($29.0 origin exports)
- Exports of services contributed an additional $19.0 Billion
- Florida is #3 high tech exporters among the States
- Most international trade related jobs pay higher than average wages

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KEY PROVISIONS OF DR-CAFTA

- Immediately opens DR-CAFTA market to 80% of U.S. exports
- Tariffs for remaining products phased out over 10 yrs.
- Boosts access to service sector in DR-CAFTA region for U.S. service providers
- Strengthens intellectual property rights protection
- Prior to the treaty 77% of DR-CAFTA products entered the U.S. Duty Free (CBI) – (99% agricultural products)

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OTHER ADVANTAGES

- Provides a level playing field for U.S. investors and traders with reliable legal framework
- Includes the strongest protection for workers rights of any U.S. trade treaty
- Strengthens Democracy in Central America and indirectly U.S. National Security
- Should reduce illegal immigration
- Does not threaten a significant number of jobs in Florida

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FLORIDA KEY SECTORS THAT WILL BENEFIT

- Information Technology
- Medical and Scientific Equipment
- Machinery and Construction Equipment
- Agricultural Products
- Chemicals and Paper Products
- Services such as; IT, Financial, A & E, Construction, Legal, Accounting, Consulting and Health Care

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FLORIDA TRADE WITH DR-CAFTA MARKET

- DR-CAFTA nations combined are Florida's #1 trading partners ($16 Billion)
- Florida is the largest exporting State to the DR-CAFTA region ($8.2 Billion)
- Florida has a market share of 52% of U.S. merchandise export to DR-CAFTA
- DR-CAFTA nations also rely on Florida for high-value knowledge based services

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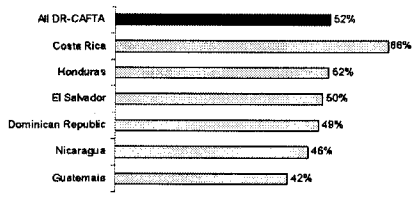
FLORIDA MERCHANDISE EXPORTS TO THE DR-CAFTA COUNTRIES

Florida Share of US Exports to DR-CAFTA Countries



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GAINS FOR FLORIDA

- Jobs – 7,000 after first year – 37,000 after 10 years
- Boost personal income by $233 Million, first year and $1.25 Billion after the 10 years
- State G.D.P. - Grow $986 Million after first year – 5.38 Billion after 10 years
- Keeps momentum for a Permanent FTAA Secretariat in Florida

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The Economic Impacts of the FTAA and Locating its Headquarters in Florida

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FTAA KEY CONCEPTS

- The Free Trade Area of the Americas (FTAA) concept was born in 1994
  - Summit of democratically-elected presidents of the Americas in Miami, Florida
  - Developed by former Presidents Bush and Clinton, supported by current president
  - Florida has been in the lead since Summit
- The FTAA would create the largest free trade area in the world
  - 800 million consumers with GDP of $14 trillion
  - Umbrella agreement: all other regional treaties under FTAA
  - One common set of rules and standards for merchandise trade, services and investment

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FTAA KEY CONCEPTS (cont.)

- Locating the FTAA headquarters in Florida is a milestone event, allowing the state to enhance its "brand" as the "Gateway of the Americas," from the Yukon in the North to the Patagonia in the South
- The FTAA plus the headquarters in Florida will generate additional direct investment into Florida, while increasing the state's market share of expanding trade in goods and services with the Americas

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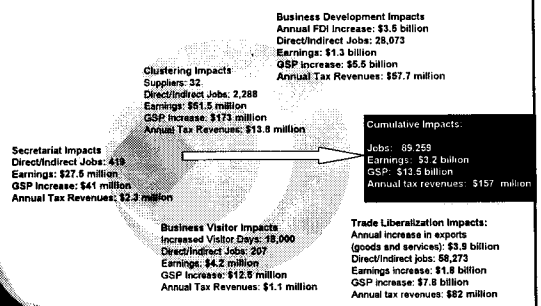
ESTIMATED ECONOMIC IMPACTS OF THE FTAA FOR FLORIDA
(Headquarters + FTAA Liberalization-Optimal Scenario)



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CONCLUSIONS

- FTAs are key components of economic development effort of Florida
  - Generators of high-wage jobs
  - Attractors of visitors and foreign direct investment
- The FTAA is still being negotiated, difficulties of a 34 countries agreement
  - US-Brazil issues
  - Headquarters quest proceeding by Atlanta, Panama, Trinidad & Tobago, Mexico and others
  - A huge economic development catalyst: Florida must stay on headquarters hunt
- While leading FTAA + headquarters effort, Florida benefits from regional FTAs such as DR-CAFTA

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Implications of the U.S.-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) For the State of Florida

Updated August 2005

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Implications of the U.S.-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) for the State of Florida

The Importance of Trade to Florida's Economy

International trade is one of Florida's largest industries, in terms of both economic output and associated employment. Florida's total annual exports of goods and services amount to about US$50 billion, equivalent to about a twelfth of Florida's entire yearly economic output (Gross State Product). Activities related to Florida's international trade help to sustain an estimated 580,000 jobs around the state. Of this, some 319,000 jobs are supported by Florida-origin exports of goods, while Florida's exports of high value-added services provide employment for another 261,000 Floridians. International trade is therefore of vital importance for Florida's economic and employment base, and especially to the quality of economic growth in our state.

About Free Trade Agreements

Free trade agreements (or FTAs) lower or eliminate barriers to the cross-border flow of goods, services, and investment funds. They may also establish common environmental, labor, and human rights standards among the signatories. Empirical evidence from around the world suggests that this form of economic integration results in increased, quantifiable economic benefits for the countries taking part in such agreements, raising incomes and standards of living. Trade is not a zero-sum game: both parties win in a cross-border commercial transaction, one by finding a buyer for its output, and the other by enjoying lower prices for finished goods (benefiting the importing country's consumers) or for materials or intermediate inputs that go into a final product (benefiting the importing country's producers).

Recent years have seen an increase in bilateral and multilateral FTAs all over the world. The U.S. currently has FTAs with the following countries: Canada and Mexico (through NAFTA), Australia, Chile, Israel, Jordan, and Singapore. And through additional non-reciprocal trade agreements such as the African Growth and Opportunity Act, the Caribbean Basin Trade Partnership Act, and the Andean Trade Preference Act, the U.S. accords preferential access to its home market to products and services from selected less developed countries. But the most ambitious plan yet is to link up the 34 nations of the Western Hemisphere (excluding Cuba) into a Free Trade Area of the Americas (FTAA) with Miami one of leading candidate cities to become the seat of the FTAA's Permanent Secretariat once such an agreement is established.

As a crossroads economy, Florida has long supported economic integration in the Western Hemisphere and beyond. The dismantling of barriers to cross-border investment and trade in goods and services benefits Florida's globally competitive producers, supporting high-wage jobs and raising incomes in the state. And bringing the FTAA's Secretariat to Miami would result in additional economic benefits for Florida, through enhanced global brand value and name recognition for our state.

Unfortunately, the process of establishing an FTAA has so far not proceeded as swiftly as originally planned, the difficulties of reconciling the positions of 34 prospective signatories being all too apparent. So in the meantime, in the absence of a comprehensive Hemisphere-wide FTAA, bilateral and multilateral FTAs between the U.S. and individual countries or groups of countries in the Americas have continued. On the heels of concluding an FTA with Chile, the United States is now seeking to liberalize trade with the countries of Central America, plus the Dominican Republic.

The Status and Key Provisions of the DR-CAFTA

In May 2004, the United States, the Dominican Republic, and five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) signed an agreement to eliminate barriers to trade, open markets, enforce fair labor conditions, and promote investment and economic growth amongst themselves. Since then, this multilateral agreement has been ratified by the national assemblies of El Salvador, Guatemala, Honduras, and the United States. Ratification by Nicaragua is expected in early August, 2005, followed by the legislatures of Costa Rica and the Dominican Republic.

Once fully implemented, the DR-CAFTA will immediately end duties on more than 80% of the $15 billion in U.S. goods exported to the region annually, including over $3 billion in exports from Florida alone. Eighty-five percent will become duty-free within five years, while the remaining tariffs will be phased out over 10 years. Under the existing U.S. Caribbean Basin Trade Partnership Act, nearly 77% of products from Central America already enter the United States duty-free. Since the DR-CAFTA is reciprocal, it will make U.S. exports to those countries duty-free as well, giving U.S. exporters of goods and services an advantage over competitors from other parts of the world.

Some key features of the DR-CAFTA include the following:

- ***Broad-Based Boost to Bilateral Trade:*** The U.S. export sectors that will benefit from this FTA include information technology, machinery and construction equipment, agricultural and paper products, chemicals, medical and scientific equipment, and various high value-added services.

- ***Trade in Services:*** The agreement will significantly boost market access to the services sectors in the DR and Central America for U.S. service providers, including telecommunications, financial (banking, insurance, securities), IT services, construction and engineering, and various other professional services (accounting, architectural, environmental, legal, medical, etc.). For Florida's highly service-intensive economy and its numerous services exporters, this is especially important.

- ***Agriculture:*** More than half of current U.S. farm exports to the DR and Central America will become duty-free immediately, while tariffs on most remaining U.S. farm products will be phased out within 15 years. And while some in the U.S. sugar industry fear that this agreement could be detrimental to their industry by opening the door to more foreign sugar imports into the U.S., the USTR estimates that increased access to the U.S. sugar market under DR-CAFTA will be equivalent to only about 1.2% of U.S. sugar production, and about 1.1% of total U.S. sugar consumption in the first year of the agreement. This is expected to grow very slowly over the next fifteen years, to about 1.7% of production and 1.6% of consumption by year 15.

- ***Textile Industry:*** The bilateral trade in textiles and apparel will be liberalized, provided certain rules of origin are met (the garment industry in the DR-CAFTA countries largely buys U.S.-made materials, unlike their counterparts in other low-cost production countries). While DR-CAFTA exports of textiles and apparel to the U.S. have been duty-free for over 20 years due to the Caribbean Basin Trade Partnership Act, U.S. exports of textiles and apparel to the region will become duty-free and quota-free immediately as a result of DR-CAFTA. Given the recent lifting of global apparel quotas (thus giving China greater access to the world's apparel markets), enacting DR-CAFTA may help to stem the erosion of the Central American garment manufacturing base and a shift of production to lower-cost China.

- ***Investment:*** With DR-CAFTA in place, U.S. firms investing in the region will enjoy a level playing field; all barriers to U.S. investment will eventually be eliminated, and U.S. companies will be treated as if they were local. Further, they will now have a reliable legal framework to operate in that did not exist before.

- ***Democracy and Immigration:*** After many years of civil strife, the past decade has given way to a commitment to democracy in Central America. Passage of the DR-CAFTA will strongly support and ingrain these efforts by nurturing the rule of law; open, transparent governance; protection of private property rights and investments; market-based competition; and regional economic integration. As markets and civil society strengthen throughout the region, citizens will have greater economic prospects locally and may be less inclined to seek better opportunities elsewhere, including by emigrating to the United States. Therefore, increased prosperity in the DR-CAFTA countries should help to stem the flow of undocumented immigrants to U.S. states such as Florida.

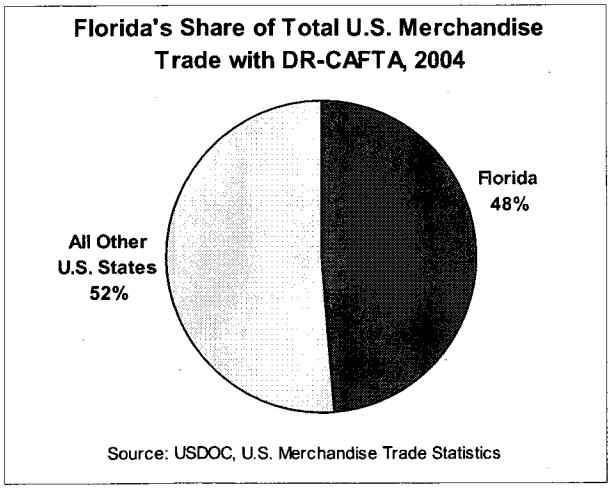
- ***Opposition to the Agreement:*** As an obvious expression of cross-border economic integration and globalization, most free trade agreements draw opposition from the usual spectrum of environmental, labor, nationalist, anarchist, and assorted other anti-globalization groups, and the DR-CAFTA is no exception. Similarly to NAFTA, opponents of the DR-CAFTA cite the supposedly detrimental impact this agreement would have on labor and environmental standards, a "race to the bottom", etc. In reality, DR-CAFTA includes the strongest protections for workers rights of any U.S. trade agreement, and requires that the signatory countries enforce their own labor laws. Unlike other parts of the world, with whom the U.S. does not have FTAs, DR-CAFTA actually provides for mechanisms to ensure that more than minimum common standards be adhered to by all signatories.

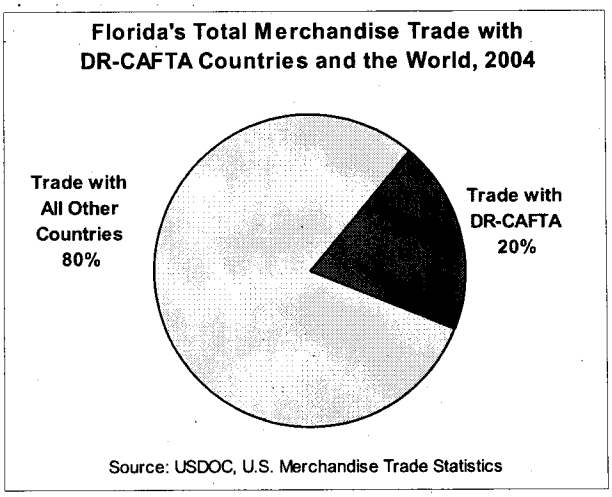
Why DR-CAFTA Is Important for Florida

As the United States' natural gateway to the DR-CAFTA countries, and those countries' principal gateway to the vast U.S. market, Florida stands to gain more than any other U.S. state from this agreement. Some of the key reasons for this include the following:

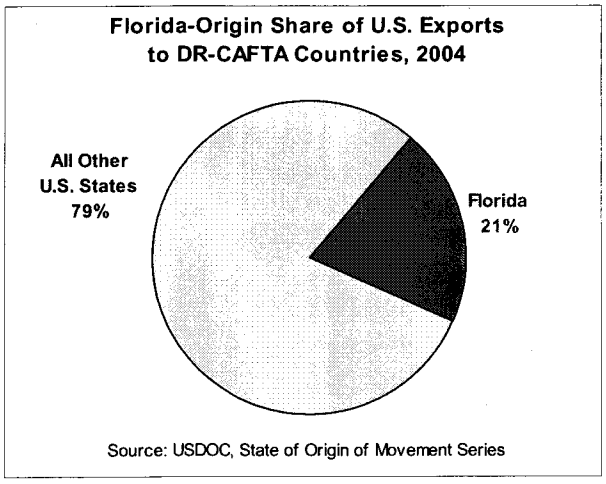
1. **Existing Trading Relationships:** Individually, each of the DR-CAFTA countries ranks among Florida's top international trading partners, while taken collectively, these countries represent the second-largest combined market in Latin America for Florida's goods and services. Florida's existing trading relationships with the DR-CAFTA countries are significant both in terms of the role that Florida plays in total U.S. trade with these countries, and in terms of the DR-CAFTA countries' share of Florida's total trading activity with the rest of the world. Preserving the unique position that Florida enjoys – and fending off any competitive threats to it – is therefore imperative to Florida's economic prosperity. Highlights:

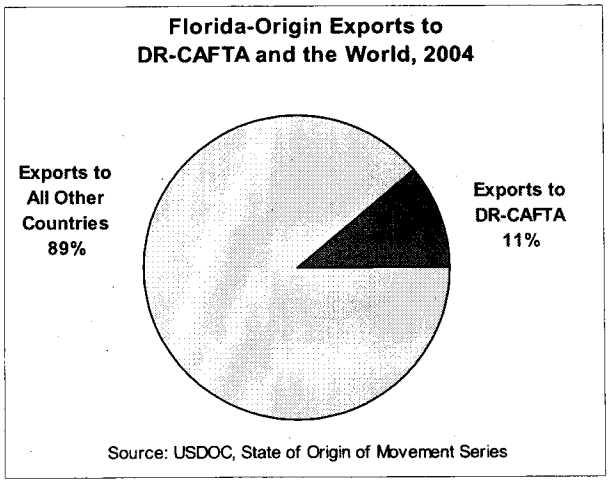
    - ***Florida is the principal gateway for the DR-CAFTA countries' merchandise trade with the United States:*** Nearly one-half of the total volume of merchandise trade flowing between the U.S. and the DR-CAFTA countries goes through Florida, and in turn these countries account for one-fifth of Florida's total worldwide merchandise trade. Valued at some US$16 billion annually, the merchandise goods entering or leaving the United States through Florida's airports and seaports provide thousands of jobs and significant earnings for Floridians.





- ***Florida is the largest U.S. exporting state to the DR-CAFTA countries:*** Valued at $3.24 billion in 2004, Florida-origin goods (i.e. those actually "made in Florida", as opposed to merely being shipped through the state) account for over a fifth of all U.S. goods exported to the DR-CAFTA countries. At the same time, these markets account for about one out of every nine dollars in Florida-origin exports worldwide, and support an estimated 35,000 jobs for Floridians. In addition, Florida's exports of high value-added services to these countries help to sustain nearly 30,000 more jobs in the state, for a combined total of about 65,000 Florida workers whose livelihood currently depends on exporting goods and services to the DR-CAFTA countries.





The State of Florida has long recognized the importance of Central America and the Caribbean to our global status. These areas are key to Florida's role of hemispheric gateway. In recent years, Enterprise Florida has undertaken high-level Team Florida Missions led by Governor Jeb Bush to the Dominican Republic (September 2003), Central America – Costa Rica, Nicaragua and El Salvador (February 2004), and a Governor's Mission to Honduras (June 2004). Additionally, Enterprise Florida conducted an Export Marketing Mission to Costa Rica in February 2004, and another Central America Mission to Guatemala, El Salvador and Honduras was completed in January 2005.

2. **Future Gains from Liberalizing Trade and Investment through DR-CAFTA:** Given Florida's existing dominant position in overall trade between the United States and the DR-CAFTA countries, it would be logical to expect that a disproportionately large share of the economic benefits from liberalizing this bilateral trading relationship would accrue to the State of Florida. Indeed, the main findings of a study by the U.S. Chamber of Commerce[1] underscore exactly that. The key benefits (direct, indirect, and induced) of enacting the DR-CAFTA can be summarized as follows:

   - ***Jobs:*** After the first year of implementation, there would be a net gain of 7,009 jobs for Floridians, expected to rise to 36,982 new jobs after the ninth year of implementation.

   - ***Personal Income:*** One year after implementation, all those additional jobs would boost Florida's total earnings by $233 million, scheduled to grow to $1.25 billion after nine years of DR-CAFTA implementation.

   - ***Economic Output (Gross State Product):*** Florida's total GSP would grow by $986 million after the first year of implementation, expected to increase to $5.28 billion in additional economic output after nine years of the FTA's implementation.

   The estimated economic benefits expected to materialize from enacting the DR-CAFTA are considerable because all these countries combined already represent one of Florida's largest export markets, and enabling freer access for Florida's globally competitive providers of goods and services would represent a unique opportunity to grow Florida's market share in each of these countries. Through the multiplier effect, this will in turn ripple throughout Florida's economy.

3. **Importance of DR-CAFTA to Further Trade Liberalization in the Western Hemisphere:** With the progress of the Free Trade Area of the Americas (FTAA) currently in a holding pattern, passage and implementation of the DR-CAFTA is a vital step on the road to creating a free internal market covering the entire Western Hemisphere – a process of which Florida has been strongly supportive, given that it is expected to have a major positive impact on the state's economy[2]. Further, all of the DR-CAFTA countries except Costa Rica have already officially endorsed Miami's candidacy to be the site of the FTAA's Permanent Secretariat, once agreement on establishing an FTAA is reached.

The Bottom Line: DR-CAFTA Will Increase Economic Opportunities for Floridians

Approval of the DR-CAFTA by both houses of the United States Congress in late July 2005 marks the culmination of a concerted effort by Governor Jeb Bush, Enterprise Florida, and the state's business community to ensure the U.S. ratification of this multilateral agreement, and represents a major success for Florida's economic development. This trade agreement is good for Florida's workers and companies, and will also help to cement our state's role as Gateway of the Americas – including boosting Miami's chances of one day being the home of the FTAA's Permanent Secretariat.

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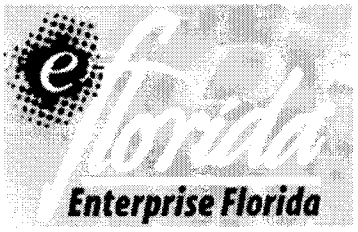
1 *The Economic Impact of the U.S.-Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) on Florida*, U.S. Chamber of Commerce – Western Hemisphere Affairs, 2004.
http://www.uschamber.com/NR/rdonlyres/eupx2yvkkzl2xs26jdiknx36mennogv6p3il5buxgndawolutkbuxhtnjmp7ttgtsgjxath35w56ap4mnhese2ge2cg/FL_DRCAFTA_2004.pdf

2 *The Economic Impacts of Locating the FTAA's Permanent Secretariat in Florida*, Enterprise Florida, Inc., 2003.
http://eflorida.com/intelligencecenter/reports/FTAAStudy2003.pdf

THE ECONOMIC IMPACTS OF LOCATING THE FTAA SECRETARIAT IN FLORIDA

MAY 2003



The Economic Impacts of Locating the FTAA Secretariat in Florida

EXECUTIVE SUMMARY

The proposed Free Trade Area of the Americas (FTAA) and the permanent Secretariat for the FTAA are milestone events for Florida. Given Florida's global, historical, cultural, and commercial ties, it is clear that Florida is the logical choice for the FTAA Secretariat. Florida would benefit greatly from the liberalization of trade together with the location of the permanent Secretariat in Miami. This analysis provides the business case and anticipated economic impacts for the location of the permanent Secretariat in Miami, Florida.

WHY IS THE FTAA IMPORTANT FOR FLORIDA?

Florida stands to gain from the FTAA process in two fundamental ways: from hosting the FTAA Secretariat in Miami, and more broadly, through the hemispheric liberalization of cross-border trade in goods and services. Undoubtedly, the FTAA liberalization process would in and of itself provide a strong boost to a state economy as heavily oriented towards international markets as Florida, especially in view of the pivotal role that our state already performs in overall U.S. commercial links with Latin American and Caribbean nations. As North American markets become more closely integrated with those in other parts of the hemisphere, the role of trade and investment intermediary – one that Florida has so successfully played in recent years – will only gain in importance. Therefore, Florida stands to benefit from passage of the FTAA relatively more so than most other U.S. states. But for Florida to be able to fully capitalize on the FTAA liberalization process, our state also vitally needs to be selected as the location for the FTAA's permanent Secretariat.

WHY IS THE FTAA SECRETARIAT IMPORTANT TO FLORIDA?

By hosting the FTAA Secretariat, Florida can look forward to benefiting from much more than just the economic activities associated with the Secretariat itself. Florida will gain a whole plethora of institutions that invariably cluster around an international inter-governmental organization (law firms, consultancies, accountants, public relations firms, NGOs, the media and others). Florida will be the uncontested "Hub of the Americas" – recognized by multinational companies as *the* center for global commerce: the place where the "rules of the game" are set, where cross-border deals are made, where the entire infrastructure supporting international commerce is already in place and rapidly expanding. This success will enable Florida to gain "market share" in the hemisphere, both in terms of international trade flows and in foreign direct investment.

The anticipated economic benefits and prestige of hosting the FTAA Secretariat in Florida, together with trade liberalization, are very significant. Based on the 5-tier conceptual model developed, the cumulative benefits are estimated as follows:

- ***Jobs:*** Passage of the FTAA and locating its Secretariat in Florida would result in an **additional 89,259 jobs** for Florida's employment base. (These jobs are created over time due to the direct and indirect impacts of hosting the Secretariat together with FTAA trade liberalization.)

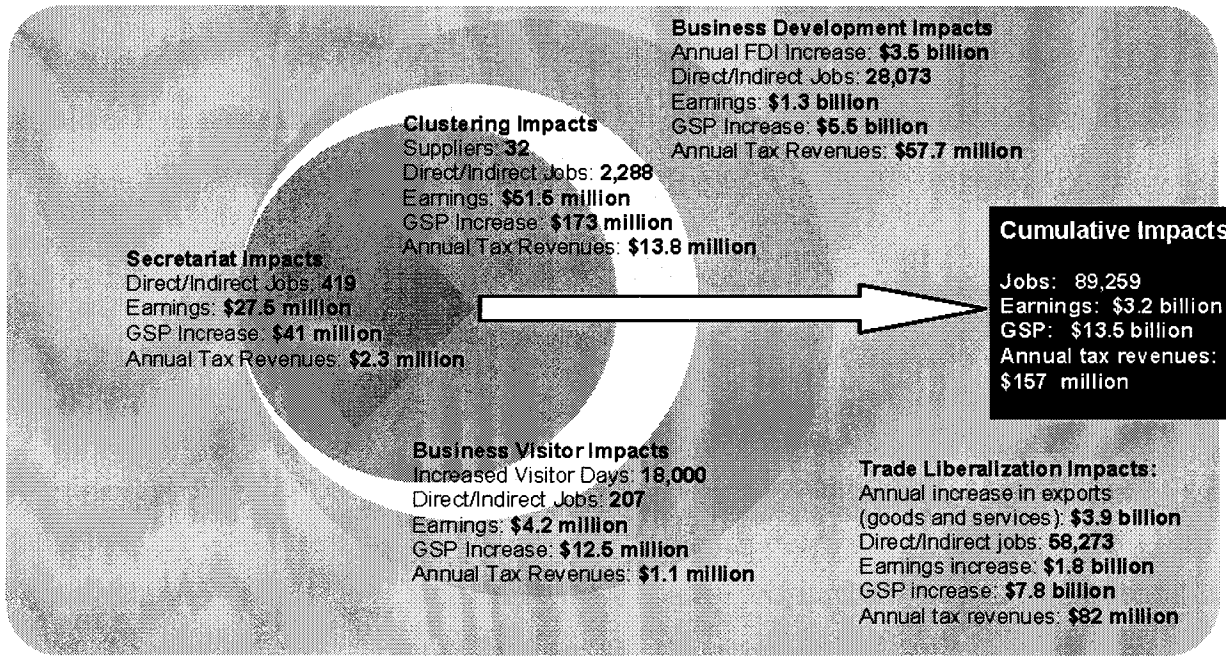
- ***Payroll:*** This increased employment would on average boost Florida's payrolls by about **$3.2 billion** each year.

- ***GSP Growth:*** Implementation of the FTAA and the presence of its Secretariat in Miami would add about **$13.6 billion** annually to Florida's Gross State Product.

- ***Taxes:*** This additional economic activity would generate an estimated **$157 million** annually in fiscal revenues for Florida's state and local governments.

These cumulative benefits, enabled by the FTAA Secretariat located in Miami and buttressed with trade liberalization and agglomeration impacts, are illustrated in the conceptual model below:

Estimated Economic Impacts of the FTAA for Florida
(Secretariat in Miami and FTAA Liberalization—Optimal Scenario)



This is a contest that Florida can ill afford to lose. The true costs for our state of not obtaining the FTAA Secretariat would be more than business opportunities foregone. Florida could face competitive threats to one of the vital pillars of its current economic structure – its very sizable international business sector.

If the FTAA becomes a reality but Florida is not the home base for the Permanent Secretariat, the positive economic impacts noted above will be considerably diminished. Besides the optimal scenario (FTAA with Secretariat in Miami), there are two other possible scenarios presented for comparative review:

- **Limited impact scenario**, in which the FTAA passes but the Secretariat is located in a city outside of the US such as Panama City, Puebla or Port-of-Spain. In this scenario, Florida would realize benefits, but those would be relatively modest.
- **Least favorable scenario**, in which the FTAA passes and the Secretariat is located not in Miami, but in another US city (Atlanta). In this scenario, in addition to significant opportunity costs, Florida's leadership as the hemispheric hub would be threatened.

The following table summarizes the comparative impacts of these three scenarios.

FTAA Liberalization and its Permanent Secretariat: Comparative Scenarios for Florida

Scenario	Direct & Indirect Job Impacts	Impact on Gross State Product, $b	Annual Fiscal Impacts, $m
Optimal Scenario (Secretariat in Miami, Florida)	89,259	$ 13.6	$ 156.7
Limited Impact Scenario (Secretariat Outside US)	45,254	$ 7.6	$ 72.6
Least Favorable Scenario (Secretariat Elsewhere in US)	8,858	$ 0.9	$ 4.5

Clearly, Florida cannot take its global leadership position for granted, especially in the face of national and international challenges to its role as the hemispheric commercial center. This is why locating the FTAA Secretariat in Florida is vital to Florida's global leadership as the **Innovation Hub of the Americas**.

BACKGROUND

The proposed Free Trade Area of the Americas (FTAA) and the permanent Secretariat for the FTAA are milestone events for Florida. Given Florida's historical trade relationships and global commerce, it is clear that Florida is a competitive location for the Secretariat and would benefit greatly from the liberalization of trade and the location of the permanent Secretariat in Florida. This analysis provides the business case and anticipated economic impact for the location of the permanent Secretariat in Florida.

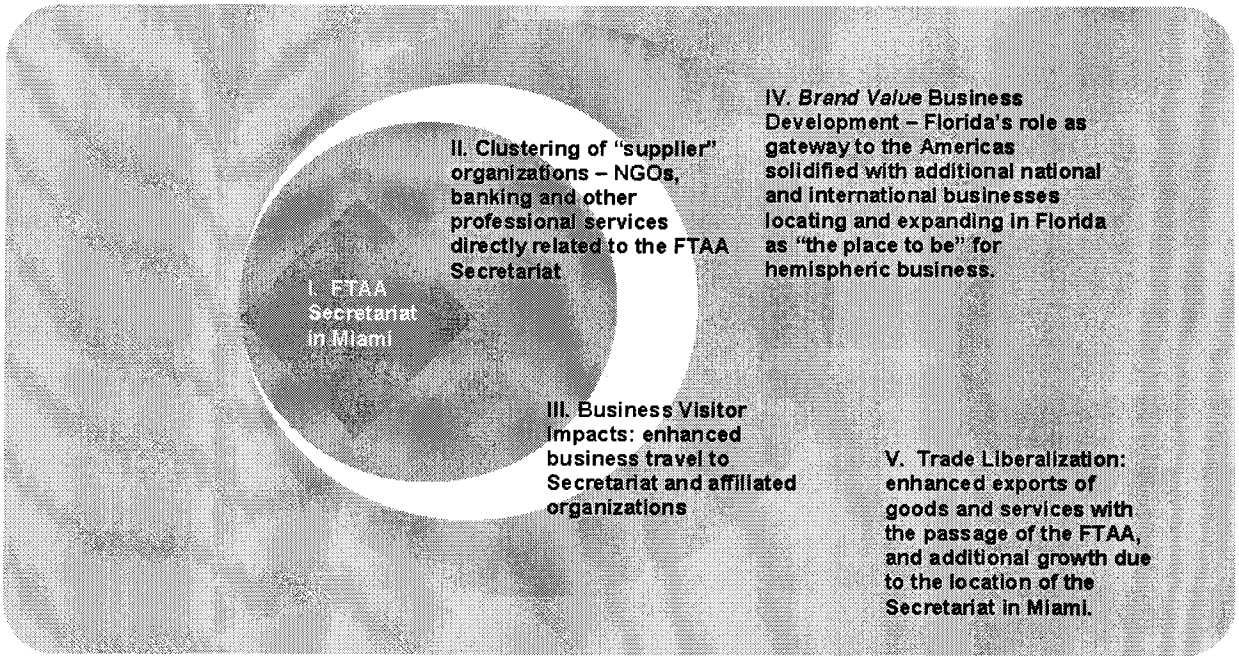
To assess the business case for the Secretariat in Florida a multidimensional model was first conceptualized through extensive case study research. Traditional industry-standard economic impact analysis was then applied to this conceptual model to estimate the potential economic benefits that the location of the FTAA Secretariat would have for Florida's economy. In addition, several alternative models were also conceptualized to assess comparative benefits and opportunity costs for these scenarios: no FTAA (base scenario); FTAA with Secretariat in Miami (optimal); FTAA with Secretariat outside the U.S. (limited impact); and FTAA with Secretariat in another U.S. location (least favorable for Florida).

What is clear is that the benefits to Florida's economy of being chosen as the location for the FTAA's permanent Secretariat cannot be overemphasized. The economic impacts extend far beyond the immediate impact of the Secretariat itself. It will be precisely in Florida's ability to attract future foreign direct investment and international trade flows that the greatest impacts of hosting the FTAA Secretariat will be felt, and where the greatest benefits to our state's economy can be expected to accrue.

Attracting the FTAA Secretariat to Miami therefore represents an essential and unique opportunity to consolidate Florida's position as the **Innovation Hub of the Americas** – the Western Hemisphere's preeminent business gateway, and, more broadly, as a veritable global entrepôt economy of the 21st century.

THE CONCEPTUAL APPROACH: A FIVE-TIERED MODEL

A five-tiered model has been built to assess these economic impacts. These five tiers are interrelated but each has direct and indirect benefits in its own right. The overall FTAA economic impact analysis will be the cumulative impact of these five tiers. The following chart illustrates these five tiers.



The five tiers of the model developed to assess the economic impact analysis of the FTAA locating in Florida are summarized below with greater detail explained in the methodological appendix.

- ***Tier 1: Economic Impact of the FTAA Secretariat in Miami***

  The impact of the FTAA Secretariat itself was based on the following given assumptions: an initial capital investment of $25 million in Secretariat facilities (Florida FTAA estimate), with a direct employment of 200 staff (Atlanta Federal Reserve Bank estimate) at an average annual salary of US$80,000. This tier also incorporates the

effects of the Secretariat's procurement of goods and services for its own consumption, such as office space, computers, office equipment, health services, and others.

- ***Tier 2: Economic Impact of "Supplier" and "Support" Organizational Clusters in Florida***

  The experience of the European Union's Commission in Brussels and that of the World Bank Group in Washington indicate that we can also expect a "clustering" of additional organizations directly doing business with the international organization in question, such as international banks, law firms, consultancies, accountants, the media, think tanks, and non-governmental organizations. The significance of these clusters far transcends just their immediate economic impacts, since the clusters' emergence puts in place an infrastructure for global business development that results in a further agglomeration effect, in turn attracting other international organizations.

- ***Tier 3: Economic Impact of Increased Business Tourism***

  Case study research also indicates that there will be an increase in business visitation, with additional business "tourism" and support services directly attributed to the location of the Secretariat in Miami. A methodology based on case study estimates, as well as standard RIMS II multipliers, was used to estimate this impact.

- ***Tier 4: Economic Impact of Florida's Enhanced Brand as "Hub of the Americas"***

  In addition to the business organizations that are expected to cluster around the Secretariat, we also expect significantly enhanced business development due to the increased and unparalleled branding of Florida as the "gateway to the Americas" and Miami as the unquestioned "business capital of Latin America". This brand value will result in Florida's ability to recruit additional multinational companies locating and investing in Florida, with an expected increase in hemispheric headquarters locations of national and international companies. It will also result in the expansion of existing Florida companies. A methodology based on Foreign Direct Investment (FDI) data has been developed to estimate and measure this impact.

- ***Tier 5: Economic Impact of FTAA Trade Liberalization***

  The FTAA will lead to the liberalization of trade in both goods and services, and Florida is well positioned to benefit from this process irrespective of where the FTAA's permanent Secretariat is located. However, this positive impact will be lessened if the Secretariat in not located in Miami, and heightened if Florida ends up being the location of choice. A methodology has also been created to estimate these impacts.

SCENARIO BUILDING

Four FTAA-related scenarios are conceivable, each of which entails a different combination of economic costs and benefits for Florida. Those possible scenarios are:

1. **Base Scenario:** No FTAA is passed, and therefore there is no permanent Secretariat in Miami. This is the base scenario, and it assumes a continuation of the trends in Florida's international trade and foreign direct investment (FDI) seen over the past few years. There are no gains and no losses associated with the FTAA. The estimated economic benefits and costs for all other scenarios are measured in relation to this base scenario.

2. **Florida's Optimal Scenario:** FTAA is passed, and Miami is the location for its permanent Secretariat. Florida reaps economic gains both from FTAA liberalization, and from the impact of hosting the secretariat in Miami. All of Florida benefits from the direct and indirect impacts. This is our "best case" scenario, with by far the greatest benefits for our state's economy.

3. **Florida's Limited Impact Scenario:** FTAA is passed, but a non-U.S. site is selected as the location for the FTAA's permanent Secretariat. Florida gains from FTAA liberalization, but not from hosting the Secretariat itself. The gains from liberalization are partly offset by the diverting of business (especially FDI) to the location hosting the Secretariat.

4. **Least Favorable Scenario for Florida:** FTAA is passed, and another U.S. site (Atlanta) is selected as the location for the FTAA's permanent Secretariat. Florida's gains from FTAA liberalization are minimized by the emergence of a powerful, competing international business center on U.S. soil. There are no gains associated with hosting the Secretariat, while in some specific areas (e.g. FDI) Florida is actually worse off compared to the base scenario. Of all possible outcomes for Florida, this is clearly the most damaging one.

Florida's Optimal Scenario

FTAA SECRETARIAT LOCATED IN FLORIDA

Summary of Estimated Annual Economic Benefits

The average annual economic benefits (assuming full model) can be summarized as follows:

- ***Jobs:*** Passage of the FTAA and locating its Secretariat in Miami would result in an additional **89,259 jobs** for Florida's statewide employment base. (These jobs are created over time due to the direct and indirect impacts of hosting the Secretariat together with FTAA trade liberalization.)
- ***Payroll:*** This increased employment would on average boost Florida's payrolls by about **$3.2 billion** each year.
- ***GSP Growth:*** Implementation of the FTAA and the presence of its Secretariat in Miami would add about **$13.6 billion** annually to Florida's Gross State Product.
- ***Taxes:*** This additional economic activity would generate an **estimated $157 million** annually in fiscal revenues for Florida's state and local governments.

Total Estimated Annual Economic Impacts of FTAA Liberalization And the FTAA Secretariat Locating in Florida

Optimal Scenario

CATEGORY	Direct & Indirect Job Impacts	Personal Earnings Impacts, $m	Output Impacts (GSP), $m	Annual Fiscal Impacts, $m
FTAA Secretariat Itself (enabler)	419	$ 27.5	$ 40.9	$ 2.3
Clustering of Companies and NGOs	2,288	$ 51.5	$ 173.4	$ 13.8
Business Visitors	207	$ 4.2	$ 12.5	$ 1.1
Business Development FDI	28,073	$ 1,283.1	$ 5,515.0	$ 57.7
Trade – Export of Goods & Services	58,273	$ 1,818.3	$ 7,816.0	$ 81.8
Total FTAA-Related Benefits to Florida	**89,259**	**$ 3,185**	**$ 13,557**	**$ 157**

Totals may not add up exactly due to rounding to the nearest $ million.

TIER-SPECIFIC ESTIMATED ANNUAL ECONOMIC BENEFITS

Tier 1 **The FTAA Secretariat Itself:** The analysis takes into consideration several types of impacts in addition to the initial $25 million investment and anticipated 200 jobs to be created in the Secretariat itself. Key benefits to Florida's economy:

- ***Jobs:*** 200 in the FTAA Secretariat, plus an additional 219 jobs supported by the Organization's direct expenditures in terms of payroll & benefits, procurement, office space, utilities and the like, for a combined total of **419 jobs**.
- ***Payroll:*** The total direct and indirect payroll impacts (at the Secretariat itself, plus through its direct purchases) for this round of impacts is estimated at **$27.5 million** annually.
- ***GSP:*** The annual contribution to Florida's total economic output (Gross State Product) is projected at **$41 million**.
- ***Taxes:*** State and local tax receipts are expected to total **$2.3 million** annually.

Tier 2 **Clustering Effect around the Secretariat:** In this functional equivalent of what would be "parts suppliers" in a more traditional economic development project, high value-added service providers can be expected to cluster around the FTAA Secretariat in the broader region to take advantage of lucrative business opportunities in areas such as consulting, legal services, public relations, banking, and other business services. Other entities, such as NGOs and the media, also usually cluster around an international inter-governmental organization, as evidenced by the case studies of the European Union institutions in Brussels and the World Bank Group in Washington. This analysis drew heavily on the EU precedent, where the clustering effect around the EU institutions has been quantified. The same ratios have been applied in this analysis, with some methodological adjustments (for the staff size and functional specificities of the FTAA Secretariat). Key economic benefits for Florida of the anticipated clustering effect:

- ***Companies:*** This clustering activity is projected to result in the establishment of the equivalent of **32 new companies**. The key word here is *equivalent*, since in practice there may be an expansion in the scope of activity of some firms that already have a local presence in Florida, or the acquisition of some of them by outside entities needing to acquire a presence in Miami so as to conduct business with the FTAA Secretariat, etc. The estimate of 32 firms is therefore a mathematical ratio and should not be taken to mean literally 32 firms.

- ***Jobs:*** These cluster firms are expected to directly employ an estimated 992 people. With the ripple effect this will have through the Florida economy, an additional 1,242 jobs will be created, for a total of **2,234 jobs** sustained annually as a result of the emergence of this cluster around the FTAA Secretariat.
- ***Payroll:*** The cumulative impact of the cluster firms and businesses supporting their activities is expected to boost total earnings in Florida by **$51.5 million** annually.
- ***GSP:*** The total annual contribution of this cluster to Florida's GSP is estimated at **$173.4 million**.
- ***Taxes:*** Florida's annual tax receipts (at both the state and local level) are expected to total **$13.8 million**.

Tier 3 Business Visitors to FTAA Secretariat and Cluster Companies: All the additional business activity surrounding and related to the FTAA Secretariat's presence in Miami (including the business cluster around it) will attract numerous business visitors to Florida. The volume and magnitude of spending by these visitors were estimated based on studies of such visitation to the Washington, DC area by people doing business with the World Bank Group, with some adjustments made based on data provided by the Greater Miami Convention and Visitors Bureau. The anticipated impact of this business tourism includes the following:

- ***Visitors:*** An estimated **18,000 business visitor days** to Florida each year.
- ***Jobs:*** The visitors' local spending will annually sustain an estimated **207 jobs** in Florida.
- ***Payroll:*** As a result of this business tourism, Florida payrolls will be an estimated **$4.2 million** higher each year.
- ***GSP:*** The business travel activity associated with the FTAA Secretariat's presence in Miami will boost Florida's GSP by **$12.5 million** annually.
- ***Taxes:*** Spending by these business visitors to Florida will contribute a total of **$1.1 million** in state and local taxes each year.

Tier 4 Impacts of Florida's Enhanced Brand Value on Business Development: The value of Florida's global business image and brand as the "Innovation Hub of the Americas" will be greatly enhanced by the FTAA Secretariat locating in Miami. This enhanced brand value will be reflected in business development results, most notably the attraction of additional Foreign Direct Investment (FDI) to the state. A "with or without" analysis of past and possible future FDI trends in Florida compares the base scenario (no FTAA agreement and therefore no Secretariat in Miami) with the optimal outcome for Florida (FTAA is implemented, with its Secretariat in Miami).

There would thus be two sets of economic benefits to Florida: gains due to the liberalization of cross-border commercial transactions, and gains attributable to the presence of the Secretariat in the state. We would stand to see an increase in foreign companies wishing to do business from Florida throughout the Western Hemisphere, as well as those that would be attracted to the presence of the business cluster emerging around the Secretariat in Miami. The presence of additional banks, accountants and auditors, consultancies, law firms, media companies, and many other kind of businesses would act as a magnet for additional multinationals, creating an "agglomeration effect" similar to those in the world's leading centers for international business and diplomacy.

Based on this analysis, the total estimated annual benefits to Florida would be as follows:

- ***FDI Stock:*** On average, the value of total holdings by foreign-affiliated companies in Florida would be some **US$3.5 billion** higher annually than if there were no FTAA and no Secretariat in Florida. (FDI stock is the total book value of all holdings by foreign affiliated companies in Florida.)
- ***FDI-Related Employment:*** If the FTAA were implemented with its Secretariat in Miami, foreign-affiliated firms in our state would on average be employing some **28,072** more Floridians annually compared with the base scenario.
- ***Payroll:*** This additional FDI-related employment would boost Florida payrolls by some **$1.283 billion** annually.
- ***GSP:*** The additional economic activity associated with higher levels of foreign direct investment in Florida would boost the state's total economic output (GSP) by **$5.515 billion** annually.
- ***Taxes:*** The additional fiscal revenues to Florida's state and local governments resulting from all this additional economic activity in the state would total **$57.7 million** annually.

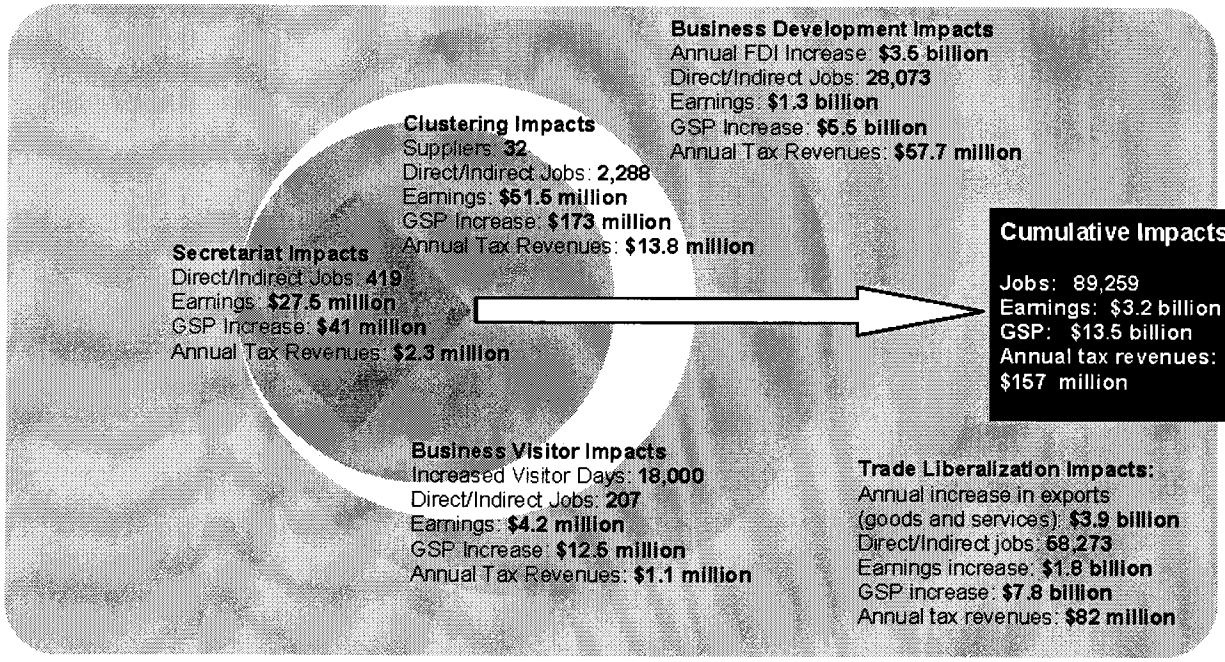
Tier 5 International Trade: Florida would stand to reap major economic benefits from the liberalization of trading regimes within the Western Hemisphere regardless of where the FTAA Secretariat is ultimately located. However, Florida stands to gain significantly more in economic terms if it does host the Secretariat in Miami. This analysis has attempted to quantify the impacts of increases in Florida's exports of both goods and services, but not any effects on Florida's economy of increased imports from the FTAA countries.

The "with or without" analysis of trade impacts compares Florida's exports of goods and services if FTAA is implemented and its Secretariat is in Miami, with the base scenario of no FTAA agreement and thus no Secretariat in Miami. As with FDI, there are therefore two sets

of annual economic benefits – those from liberalization, and those resulting form hosting the Secretariat. Aggregated, those benefits include:

- ***Increased Exports of Goods and Services:*** With full FTAA implementation and the organization's permanent Secretariat based in Miami, each year Florida would on average export goods and services valued US$5.6 billion more than in the absence of a FTAA agreement and without a Secretariat in Miami. However, assuming that half of the FDI in Florida will go into facilities geared towards exporting goods or services, the estimated total increase in Florida's exports must be reduced by one half of the value of the anticipated gains from FDI, in order to avoid double-counting economic benefits. Thus adjusted, Florida's net gains in exports of goods and services will on average amount to some **US$3.9 billion** annually.
- ***Jobs:*** On average, this (adjusted) higher export volume would sustain an estimated **58,273 jobs** more annually than would be the case in the base scenario.
- ***Payroll:*** These additional jobs would on average contribute some **$1.818 billion** to Florida payrolls each year.
- ***GSP:*** The increase in Florida's exports of goods and services under this Scenario would add **$7.816 billion** to Florida's total annual economic output.
- ***Taxes:*** The additional economic activity associated with this increase in trade volume would on average contribute an estimated **$81.8 million** in tax revenues each year.

Total Average Annual Economic Impacts of the FTAA Secretariat for Florida (Optimal Scenario)



Comparative Analysis
LESS FAVORABLE SCENARIOS FOR FLORIDA

FTAA SECRETARIAT NOT LOCATED IN FLORIDA

Challenges to Florida's role as hemispheric commercial intermediary are numerous, both from within and from outside the Untied States. As markets open, barriers fall, standards converge, and distances shrink, other business locations – hitherto seen as unlikely contenders – cast themselves into this epic contest, touting their competitive assets such as corporate headquarters, a skilled workforce, state-of-the-art communications and transportation links, low business costs, and cultural affinities. Florida can therefore not afford to take for granted its current role of preeminent business gateway, nor complacently assume that it will last indefinitely in a more closely integrated hemisphere.

The Optimal Scenario assumed two distinct sets of economic benefits for Florida – gains from hosting the permanent Secretariat in Miami as well as the liberalization of trade. The remaining three Scenarios examine what the consequences for Florida's economy would be if our state were to not host the FTAA's permanent Secretariat. It is therefore assumed that there are no impacts for first three Tiers of our economic impact model, since all of them entail the presence of the Secretariat in Florida. Without the Secretariat in Miami, that leaves only the impacts on Florida's foreign direct investment and on its exports of goods and services.

BASE SCENARIO

The Base Scenario assumes that there is no passage and implementation of the FTAA, and therefore no FTAA Secretariat in Florida or anywhere else. By extrapolating from the most recent available state-level data on FDI stock, foreign-affiliated employment, and the exports of goods and services, it is possible to project what the growth in those indicators would be for Florida if no exogenous variables were introduced, such as the passage and implementation of the FTAA.

Following these past multiyear trends, in all likelihood Florida's total FDI stock in 2010 would stand at $77.3 billion (102% higher than in 2000), while foreign-affiliated firms in the state would be employing 626,676 Floridians (104% more than in 2000). Florida-origin goods exports to Latin American and Caribbean countries (excluding Mexico) would total $24.5

billion in 2010, an increase of 91% over 2002. Over the same period, Florida's services exports to those countries would rise by 19%, reaching $10.04 billion. Combined, Florida's exports of goods and services to Latin America would sustain (retention and creation of jobs) an estimated 426,554 jobs in 2010.

LIMITED IMPACT SCENARIO

This scenario envisions the FTAA passing but a location outside the United States (Panama City, Puebla, or Port-of-Spain) being chosen as the home for the FTAA's permanent Secretariat. Overall, this turn of events would have a modestly positive impact on Florida's economy compared with the Base Scenario, though significantly less than if the Secretariat were in Miami. Florida would not be able to fully capitalize on the economic benefits of liberalization due to the FTAA, since a portion of the increased business activity would be channeled to another location. There would be modest gains in FDI in Florida, and slightly bigger ones on the trade side: some US$1.6 billion more annually in FDI, supporting an average of 12,953 jobs more than in the Base Scenario; and exports of goods and services to LAC countries valued some US$2.5 billion more than in the Base Scenario, supporting an estimated 32,301 more jobs each year. These projected gains should be viewed in the context of the size of Florida's overall economy (about half a trillion dollars) – hence the conclusion of modest gains in this "limited impact" scenario.

The following table summarizes the economic direct and indirect impacts of the limited impact scenario:

Total Estimated Annual Economic Impact of FTAA Liberalization and the FTAA Secretariat Locating Outside the United States

Limited Impact Scenario (SECRETARIAT OUTSIDE US)	Direct & Indirect Job Impacts	Personal Earnings Impacts, $m	Output Impacts (GSP), $m	Annual Fiscal Impacts, $m
FTAA Secretariat Itself	0	$ 0	$ 0	$ 0
Clustering of Companies and NGOs	0	$ 0	$ 0	$ 0
Business Visitors	0	$ 0	$ 0	$ 0
Business Development – FDI	12,953	$ 592.0	$ 2,544.6	$ 26.6
Trade – Exports of Goods & Services	32,301	$ 1,021.8	$ 5,091.8	$ 46.0
Total FTAA-Related Benefits to Florida	**45,254**	**$ 1,614**	**$ 7,636**	**$ 73**

Totals may not add up exactly due to rounding to the nearest $ million.

LEAST FAVORABLE SCENARIO FOR FLORIDA

From the standpoint of Florida's economic development, the least favorable outcome would be the locating of the permanent FTAA in another U.S. city (Atlanta) instead of Miami. In addition to the absence of any benefits to Florida from hosting the Secretariat, the Secretariat's presence in another major U.S. business hub would potentially divert both international trade and investment flows to that rival location – directly siphoning off international business from Florida. This Scenario would largely negate the benefits that Florida would enjoy from FTAA liberalization: not only would Florida not gain the business opportunities resulting from the prestige and image of hosting the Secretariat, but it would actually lose much of the business that would otherwise flow to the state anyway in the absence of an FTAA agreement.

In terms of projected FDI and export figures, Florida would actually lose "market share" (i.e. its share of the U.S. total) if another U.S. site were to host the Secretariat. Total holdings by foreign-affiliated companies in Florida would be some US$1.4 billion lower each year than in the Base Scenario, and they would on average be employing 11,100 fewer Floridians each year. Florida's exports of goods and services to LAC countries would on average be only US$ 1.5 billion higher than without an FTAA agreement, annually supporting only an additional 19,958 jobs in the state – miniscule gains considering the impact that trade liberalization has historically had around the world on export-driven economic growth and job creation.

The following table summarizes the direct and indirect impacts of this least favorable scenario:

Total Estimated Annual Economic Impact of FTAA Liberalization and the FTAA Secretariat Locating in the United States, but Not in Florida

Least favorable Scenario (SECRETARIAT ELSEWHERE IN US)	Direct & Indirect Job Impacts	Personal Earnings Impacts, $m	Output Impacts (GSP), $m	Annual Fiscal Impacts, $m
FTAA Secretariat Itself	0	$ 0	$ 0	$ 0
Clustering of Companies and NGOs	0	$ 0	$ 0	$ 0
Business Visitors	0	$ 0	$ 0	$ 0
Business Development – FDI	(11,100)	($ 507.3)	($ 2,180.7)	($ 22.8)
Trade – Exports of Goods & Services	19,958	$ 607.0	$ 3,053.6	$ 27.3
Total FTAA-Related Benefits to Florida	**8,858**	**$ 100**	**$ 873**	**$ 4**

Totals may not add up exactly due to rounding to the nearest $ million.

METHODOLOGICAL NOTES

Early on in this analysis, it became apparent that a standard economic impact model used for more conventional economic development projects (like RIMS II, IMPLAN, or REMI) would not suffice given this particular project's multi-layered complexity ("regular" economic impacts, the emergence of related industry clusters, effects on international trade and investment flows, increased business travel, and fiscal implications). Instead, a combination of different methodological approaches and elements was employed to assess the various types of impacts that the presence of the FTAA Secretariat in Miami would entail:

- A survey of global experience and "best practices" with respect to international organizations. Some of the institutions looked at include those of the European Union in Brussels, the World Bank Group in Washington, the Asian Development Bank in Manila, the European Bank for Reconstruction and Development in London, the World Trade Organization in Geneva, the Organization for Economic Cooperation and Development in Paris, the Association of Southeast Asian Nations in Jakarta, as well as various agencies of the United Nations in New York, Geneva, and Vienna. By far the most comprehensive study of an international organization's impact on a regional economy was that carried out by George Mason University on the World Bank Group, followed by miscellaneous information on the EU institutions in Brussels. Accordingly, many of these methodological postulates were incorporated into our analysis.

- Standard direct-impact and final-demand multipliers from the RIMS II (input-output) economic impact model for Florida in selected sectors that would be impacted by the presence of the FTAA Secretariat in Miami were used. Assumptions about anticipated wage levels, spending patterns, and procurement practices of the future international organization (the FTAA Secretariat) were based on a combination of World Bank and Florida International Bankers' Association values.

- This analysis used merchandise trade and foreign direct investment (FDI) data from the U.S. Department of Commerce, enabling an extrapolation of possible future trade and investment trends and multiple "with" and "without" scenario building.

- Estimates of hemispheric trade volume growth due to liberalization were adopted from the National Association of Manufacturers and other reputable sources specializing in trade policy, with one key assumption being that U.S. exports to the Latin America and Caribbean (LAC) region, excluding Mexico, are forecast to triple during the first 10 years of FTAA implementation (compared to 2002 levels). Since in any given year Florida-origin exports account for about a quarter of all U.S. exports of goods to the LAC region, this analysis assumes that, just like total U.S. exports to the region, Florida-origin exports to the LAC countries will triple during the first ten years of implementation. While Florida's economy is not very manufacturing-intensive, a large portion of what production of goods there is in the state is destined for overseas markets. With its large market share in the FTAA countries,

Florida can therefore expect significant economic gains from liberalized merchandise trade in the Hemisphere.

- Studies and surveys conducted by Florida International University's Institute of International Professional Services were used to provide a measure of the volume and possible economic impact of Florida's international trade in services, in the absence of official U.S. government data at the state level. This has enabled estimates and scenario building comparable to those for the trade in goods and for FDI. The LAC region is assumed to account for a constant 53% of Florida's worldwide total of services exports. Economic gains from the liberalization of the trade in services are expected to exceed the gains from freer trade in goods within the Hemisphere – a crucial factor for Florida's services-intensive economy.

- The contribution of Florida's exports to Gross State Product is derived from a ratio utilized by the University of Miami's Professor Raymond Fishe in the economic impact analysis of Florida's services exports. The impact of FDI on GDP is computed based on a ratio of trade and FDI's respective contributions to total payrolls in Florida. Employment by foreign-affiliated firms is assumed to be around 8,100 Floridians per $1 billion in FDI stock, which is the average level over the second half of the 1990s, and which is very close to the 8,200 figure cited by the provincial government of Ontario, Canada.

- Assumptions about state and local taxation levels based on a combination of national, state, and local sources, as well as on some of the taxation rates utilized in Ernst & Young's economic impact analyses of Enterprise Florida's activities. Ratios for taxation at the state level were adopted from the Federation of Tax Administrators, which estimate that state taxes account for 5.5% of Florida's total personal income. A further estimated 3.5% of the total amount is levied in taxes at the local level, such as the county 1% sales tax option, property taxes, franchise and impact fees, etc. Both of these taxation ratios are slightly higher for the business visitor impacts part of our analysis, to account for additional taxes levied on tourists, such as rental car surcharges, bed taxes, convention and tourism development fees, and the like. These rates are adapted from the information provided by the Greater Miami Convention & Visitors Bureau and the Miami-Dade County government.

- Temporal Distribution of Economic Impacts: Since the FTAA liberalization will in practice be a process and not a one-time occurrence, the estimated economic benefits will be unevenly spread over time. Likewise, the establishment of the permanent Secretariat, if ultimately located in Miami, will yield the full expected benefits only after full build-out, meaning once it is fully up and running and all of its "suppliers" have located in its proximity and the business visitors have started coming, etc. Because the purpose of this analysis is not to develop a time-series scenario but to develop an anticipated business case, this analysis assumes a build-out of the anticipated tiers to provide a bottom line perspective and estimates the impacts annually based on full implementation.

- This economic impact model is static, and not a dynamic one. It assumes constant relative factor prices, a constant inter-sectoral economic structure, no inflation, constant exchange rates, and no additional exogenous economic shocks comparable to the events of September 11. The model is also not able to account for other external factors such as changes in technology, production process, and the like.

- These estimates are conservative and should be viewed as minimum-level impacts; the estimated benefits may very well be significantly greater following full FTAA implementation.

CREDITS

This report was prepared for Florida FTAA, Inc. by Enterprise Florida, Inc. in partnership with J. Antonio Villamil, Chairman of Governor Bush's Council of Economic Advisors and Vice-Chair of the Florida FTAA, Inc.

The conceptual model utilized for developing the economic impact analysis was developed by Enterprise Florida in collaboration with Dr. Villamil. Enterprise Florida conducted research, calculated the economic impact analysis and prepared the report. We thank all those who made this report possible.

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